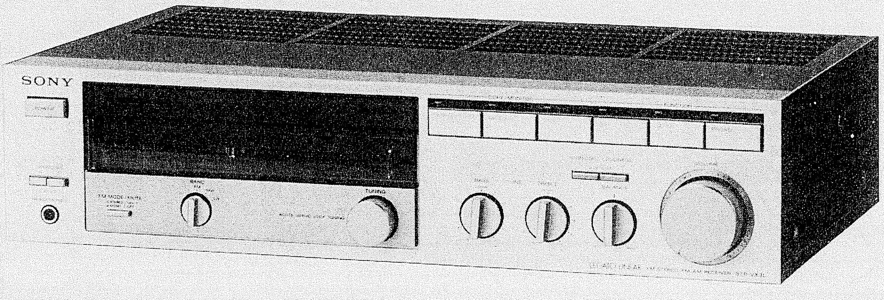
STR-VX3L

AEP Model
UK Model



FM STEREO/FM-AM RECEIVER

SPECIFICATIONS

Amplifier section

Continuous RMS power output (less than 0.008% THD, both channels driven simultaneously)	
	At 1 kHz 40 + 40 watts (8 ohms) At 20 Hz–20 kHz 35 + 35 watts (8 ohms) According to DIN 45500 35 + 35 watts (8 ohms)
Power bandwidth (IHF)	5 Hz–30 kHz
Harmonic distortion	Less than 0.008% at rated output
Intermodulation (IM) distortion (60 Hz:7 kHz = 4:1)	Less than 0.008% at rated output
Damping factor	50 at 1 kHz, 8 ohms
Residual noise	Less than 200 μV at 8 ohms

Inputs

	Sensitivity	Impedance	S/N	Weighting network
PHONO	2.5 mV	50 k ohms	80 dB	A
TAPE 1, 2	150 mV	50 k ohms	97 dB	A
AUX	150 mV	50 k ohms	97 dB	A

Measured with rated output power into 8-ohm loads (both channels driven simultaneously) at 1 kHz

Outputs

REC OUT 1, 2	Voltage 150 mV, Impedance 4.7 k ohms
HEADPHONES	Accepts low or high impedance headphones
SPEAKERS	8–16 ohm speakers are suitable

Frequency response	PHONO: RIAA equalization curve ±0.5 dB AUX, TAPE 1, 2: 5 Hz–90 kHz $^{+0}_{-1}$ dB
Tone controls	BASS: ±8 dB at 100 Hz TREBLE: ±8 dB at 10 kHz
Loudness control (att. 30 dB)	+8 dB at 100 Hz, +3 dB at 10 kHz
Subsonic filter	12 dB/octave attenuation below 15 Hz

FM tuner section

Tuning range	87.5–108.0 MHz
Antenna terminals	300 ohms balanced, 75 ohms unbalanced
Intermediate frequency	10.7 MHz
Sensitivity at 46 dB quieting	18.3 dBf, 4.5 μV (mono) 40.2 dBf, 56 μV (stereo) at 40 kHz deviation
Usable sensitivity	11.2 dBf, 2.0 μV (IHF) 9.8 dBf, 1.7 μV (S/N 26 dB) at 40 kHz deviation
Signal-to-noise ratio	78 dB (mono), 72 dB (stereo) at 40 kHz deviation

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

SONY®

SERVICE MANUAL

Harmonic distortion	0.15% (mono), 0.25% (stereo) at 1 kHz
Separation	45 dB at 1 kHz
Frequency response	40 Hz–12.5 kHz ±0.5 dB
Selectivity	55 dB (300 kHz)
Capture ratio	1.0 dB
AM suppression ratio	54 dB
Image response ratio	50 dB
IF response ratio	90 dB
Spurious response ratio	70 dB
RF intermodulation	60 dB (IHF)
Muting threshold	Approx. 25.2 dBf, 10 μV

MW/LW tuner section

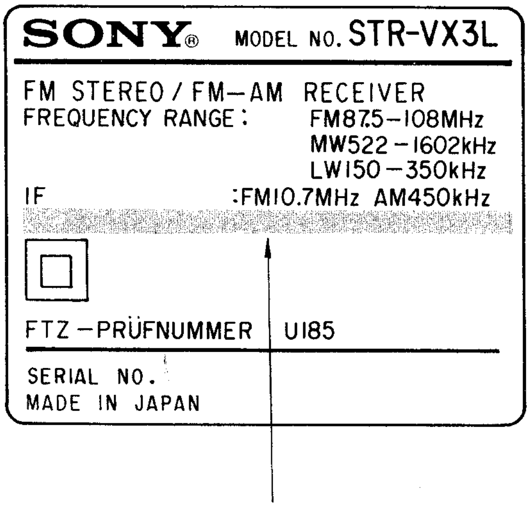
		MW	LW
Tuning range		522 kHz–1,602 kHz	150 kHz–350 kHz
Antenna		Built-in ferrite bar antenna, External antenna terminal	
Intermediate frequency		450 kHz	450 kHz
Usable sensitivity	built-in antenna	200 μV/m (1,000 kHz)	300 μV/m (230 kHz)
	external antenna	100 μV (1,000 kHz)	100 μV (230 kHz)
Signal-to-noise ratio (50 mV/m)		54 dB	54 dB
Harmonic distortion (50 mV/m, 400 Hz)		0.3%	0.3%
Selectivity		35 dB (9 kHz)	35 dB (9 kHz)

General

System	FM stereo, FM/AM superheterodyne tuner Pure-complementary symmetry dc power amplifier
Power requirements	AEP model : 220 V ac, 50/60 Hz UK model : 240 V ac, 50/60 Hz
Power consumption	AEP model : 90 W UK model : 340 W
AC outlets	AEP model : Two switched, total 100 W UK model : Two switched, total 200 W
Dimensions	Approx. 430×105×315 mm (w/h/d) (17 × 4 3/16 × 12 3/8 inches) including projecting parts and controls
Weight	Approx. 6.5 kg (14 lb 6 oz), net Approx. 7.0 kg (15 lb 7 oz) in shipping carton

MODEL IDENTIFICATION

– Specification Label –



SONY® MODEL NO. STR-VX3L

FM STEREO / FM–AM RECEIVER

FREQUENCY RANGE : FM87.5–108MHz

MW522 – 1602kHz

LW150 – 350kHz

IF :FM10.7MHz AM450kHz

FTZ –PRÜFNUMMER U185

SERIAL NO.

MADE IN JAPAN

AEP model:	AC 220V~	50/60Hz	90W
UK model:	AC 240V~	50/60Hz	340W

1

MELF (Metal Electrodes Face-Bonding) Components (AEP Model)

Warning

If MELF components are forcibly removed from the printed circuit board with pincers or pliers, the circuit board pattern is likely to peel away. Always remove MELF components according to the procedure described on the next page. Replace MELF components with the lead type components.

MELF components are soldered directly to the surface of the printed circuit board.

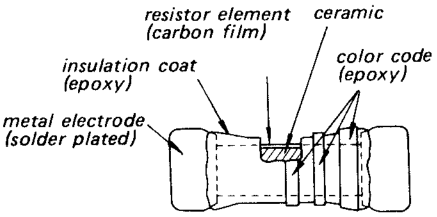
MELF resistors and capacitors have the same dimensions and are distinguished by their background colors: light brown for resistors, and pink or light green for capacitors.

The MELF resistor color coding is the same as for conventional resistors, and MELF capacitor color coding is the same as for tube-type ceramic capacitors. Note, however, that all MELF resistors are rated at ¼W and ±5%.

Components larger than resistors and without a color code are cross conductors, which are used instead of jumper wires.

1. Structure

(Resistors)


resistor element
(carbon film)
ceramic
insulation coat
(epoxy)
color code
(epoxy)
metal electrode
(solder plated)

(Capacitors)

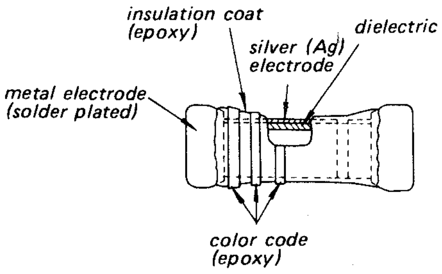
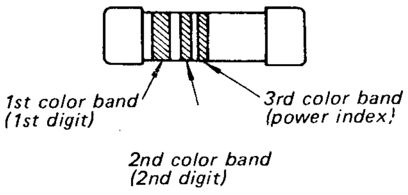
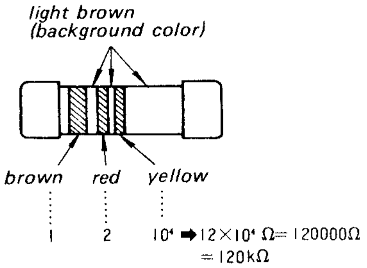

insulation coat
(epoxy)
dielectric
silver (Ag)
electrode
metal electrode
(solder plated)
color code
(epoxy)

Fig. 1

2. Color Code Reading


1st color band
(1st digit)
3rd color band
(power index)
2nd color band
(2nd digit)

(Example of Resistor)


light brown
(background color)
brown
red
yellow
1
2
10⁴ ➡12×10⁴ Ω= 120000Ω
= 120kΩ

(Example of Capacitor)

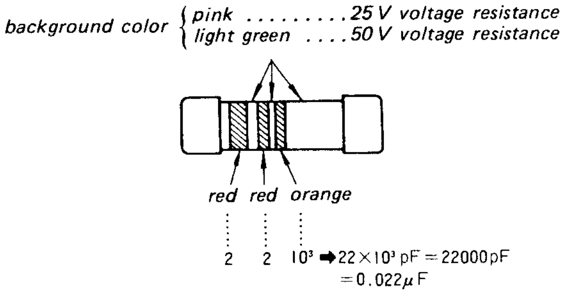

background color
pink ....25 V voltage resistance
light green ....50 V voltage resistance
red
red
orange
2
2
10³ ➡22×10³ pF = 22000pF
=0.022μF

Fig. 2

3. How to Remove MELF Components and Mount Replacements

Use a soldering iron of at least 40W with an iron tip 4mm in diameter and file the tip down to the angle shown in the diagram.

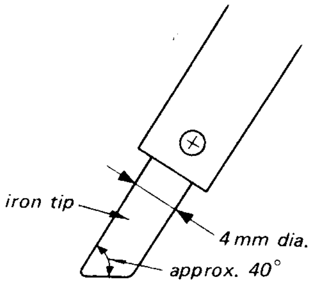

iron tip
4 mm dia.
approx. 40°

Fig. 3

1. Bring the flat surface of the soldering iron in equal contact with both soldered ends of the component.
2. The solder should melt in about 4 seconds. (The solder will melt more readily if a small amount of solder is attached to the iron tip and the iron tip is placed against the component.)
3. Once the solder has melted, tap the component aside with the tip of the soldering iron, and remove it from the board.

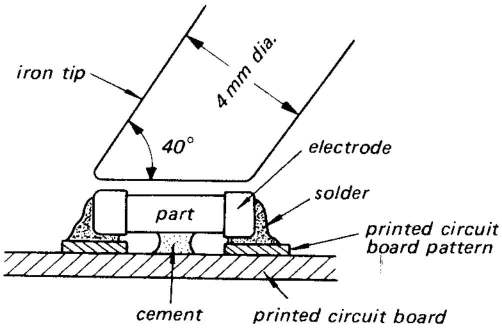

iron tip
4 mm dia.
40°
electrode
part
solder
printed circuit board pattern
cement
printed circuit board

Fig. 4

4. Use lead type resistors or capacitors to replace the MELF components. These replacements may be mounted either with short leads (see Fig. 5), or by covering a lead with tubing (see Fig. 6).

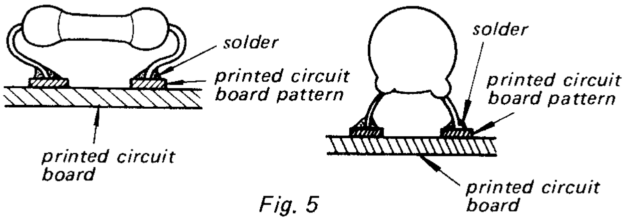

solder
printed circuit board pattern
printed circuit board
solder
printed circuit board pattern
printed circuit board

Fig. 5

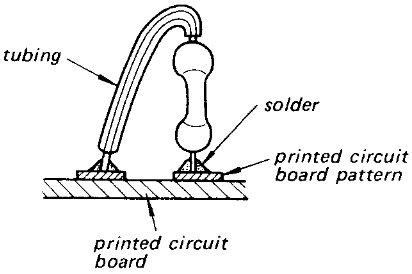
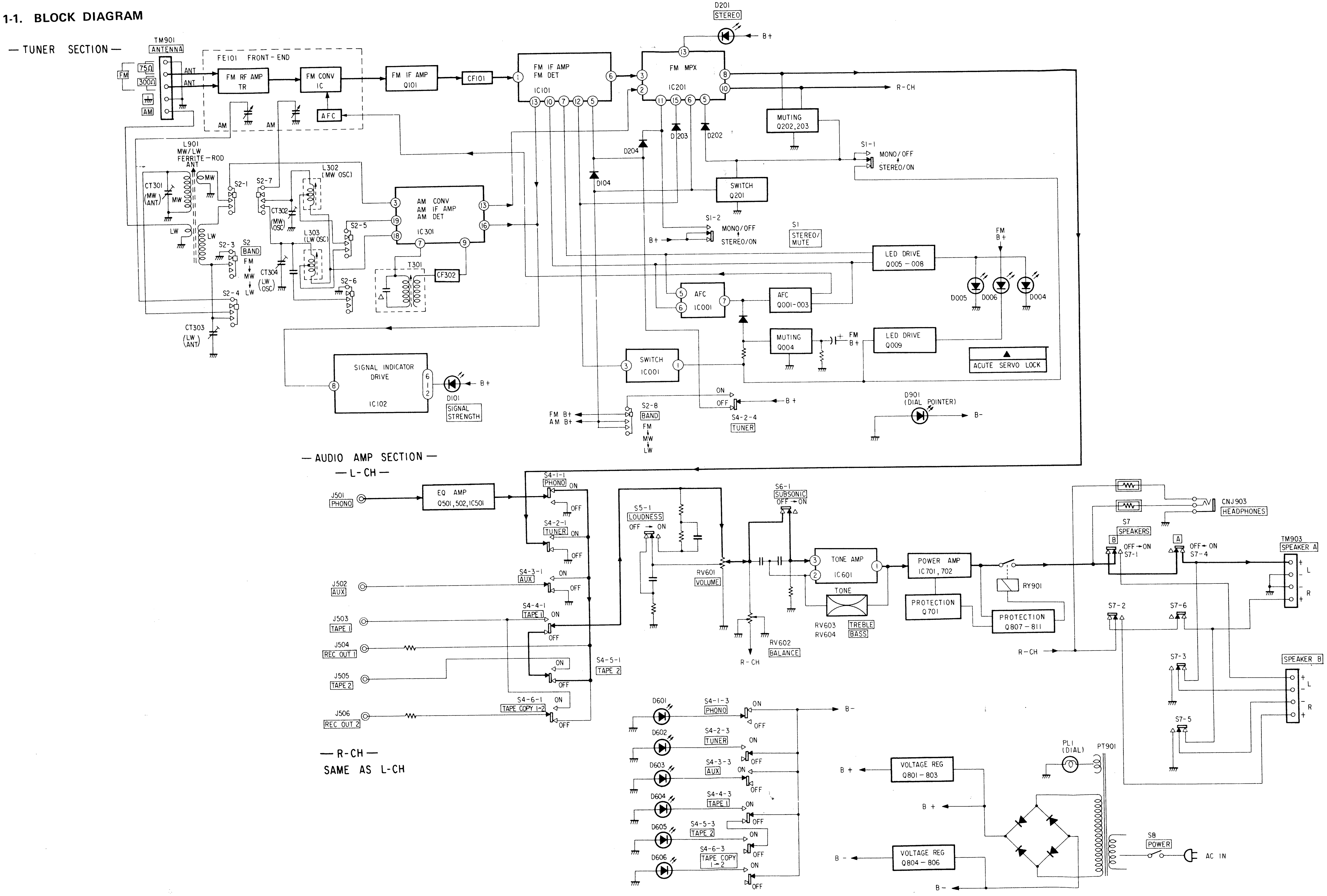

tubing
solder
printed circuit board pattern
printed circuit board

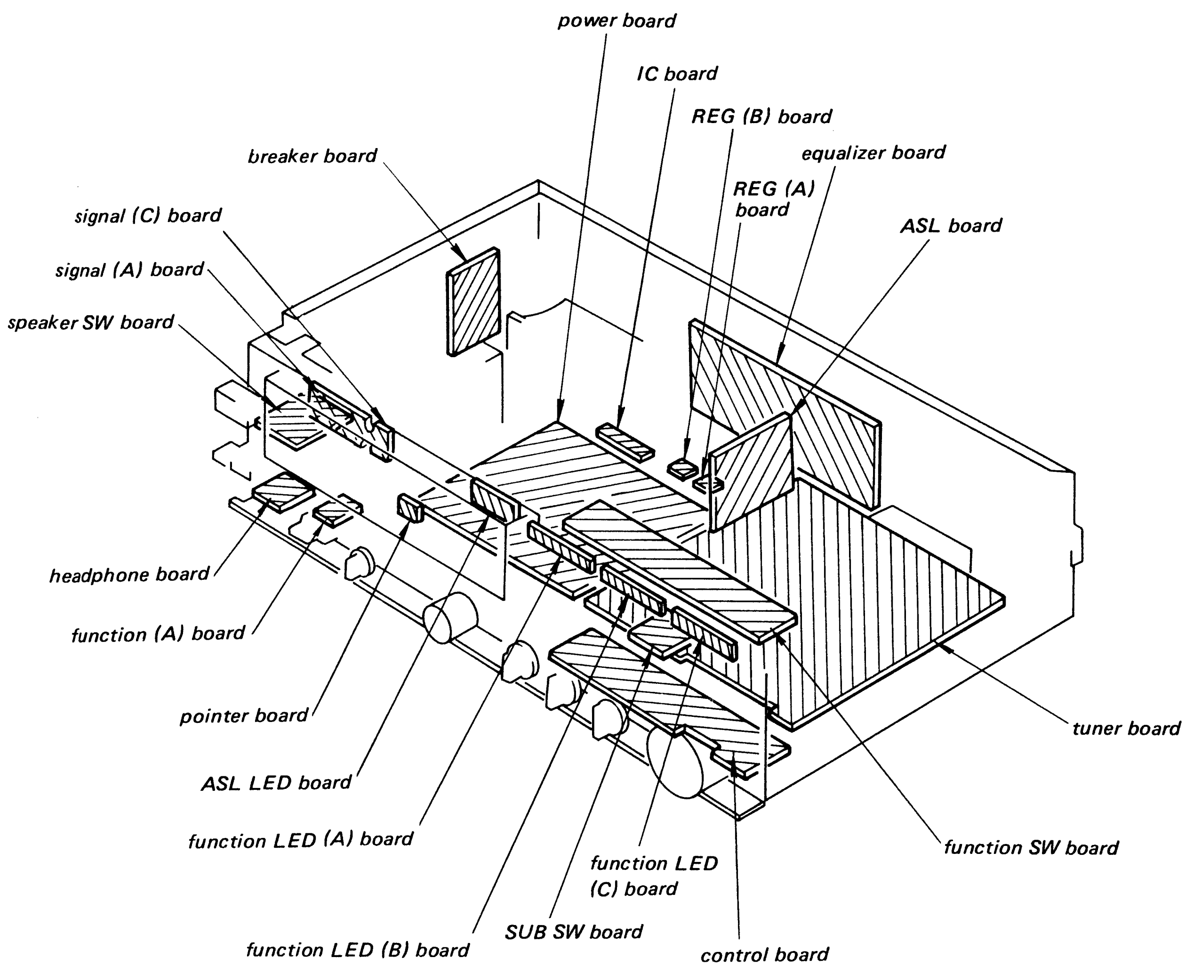
Fig. 6

SECTION 1
OUTLINE

1-1. BLOCK DIAGRAM


— TUNER SECTION —
TM901 ANTENNA
FM
75Ω
300Ω
AM
ANT
FE101 FRONT-END
FM RF AMP TR
FM CONV IC
AFC
FM IF AMP Q101
CF101
FM IF AMP FM DET IC101
FM MPX IC201
D201 STEREO
B+
R-CH
MUTING Q202,203
S1-1 MONO/OFF STEREO/ON
D203
D202
D204
D104
SWITCH Q201
L901 MW/LW FERRITE-ROD ANT
CT301 (MW ANT)
MW
LW
S2-1
S2-7
L302 (MW OSC)
CT302 (MW OSC)
L303 (LW OSC)
CT304 (LW OSC)
S2-3 BAND FM ↓ MW ↓ LW
S2-4
S2-5
S2-6
CT303 (LW ANT)
AM CONV AM IF AMP AM DET IC301
T301
CF302
S1-2 MONO/OFF STEREO/ON
S1 STEREO/MUTE
FM B+
LED DRIVE Q005 - 008
AFC IC001
AFC Q001-003
D005
D006
D004
MUTING Q004
LED DRIVE Q009
ACUTE SERVO LOCK
SWITCH IC001
SIGNAL INDICATOR DRIVE IC102
D101 SIGNAL STRENGTH
FM B+
AM B+
S2-8 BAND FM ↓ MW ↓ LW
ON OFF
S4-2-4 TUNER
D901 (DIAL POINTER)
B-
— AUDIO AMP SECTION —
— L-CH —
J501 PHONO
EQ AMP Q501,502,IC501
S4-1-1 PHONO ON OFF
S4-2-1 TUNER ON OFF
J502 AUX
S4-3-1 AUX ON OFF
J503 TAPE 1
S4-4-1 TAPE 1 ON OFF
J504 REC OUT 1
J505 TAPE 2
S4-5-1 TAPE 2
J506 REC OUT 2
S4-6-1 TAPE COPY 1-2 ON OFF
S5-1 LOUDNESS OFF → ON
RV601 VOLUME
RV602 BALANCE
R-CH
S6-1 SUBSONIC OFF → ON
TONE AMP IC601
TONE
RV603 TREBLE
RV604 BASS
POWER AMP IC701,702
PROTECTION Q701
RY901
PROTECTION Q807-811
R-CH
CNJ903 HEADPHONES
S7 SPEAKERS
B OFF → ON S7-1
A OFF → ON S7-4
TM903 SPEAKER A
L
R
S7-2
S7-6
S7-3
S7-5
SPEAKER B
— R-CH — SAME AS L-CH
D601 S4-1-3 PHONO ON OFF
D602 S4-2-3 TUNER ON OFF
D603 S4-3-3 AUX ON OFF
D604 S4-4-3 TAPE 1 ON OFF
D605 S4-5-3 TAPE 2 ON OFF
D606 S4-6-3 TAPE COPY 1-2 ON OFF
B-
B+
VOLTAGE REG Q801-803
VOLTAGE REG Q804-806
PL1 (DIAL)
PT901
S8 POWER
AC IN

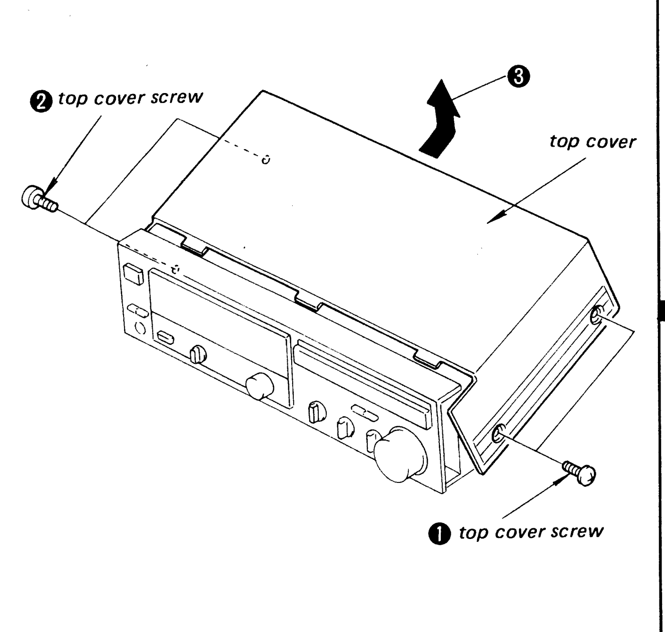
1-2. BOARDS LOCATION


power board
IC board
REG (B) board
equalizer board
REG (A) board
ASL board
breaker board
signal (C) board
signal (A) board
speaker SW board
headphone board
function (A) board
pointer board
ASL LED board
function LED (A) board
function LED (B) board
SUB SW board
function LED (C) board
control board
tuner board
function SW board

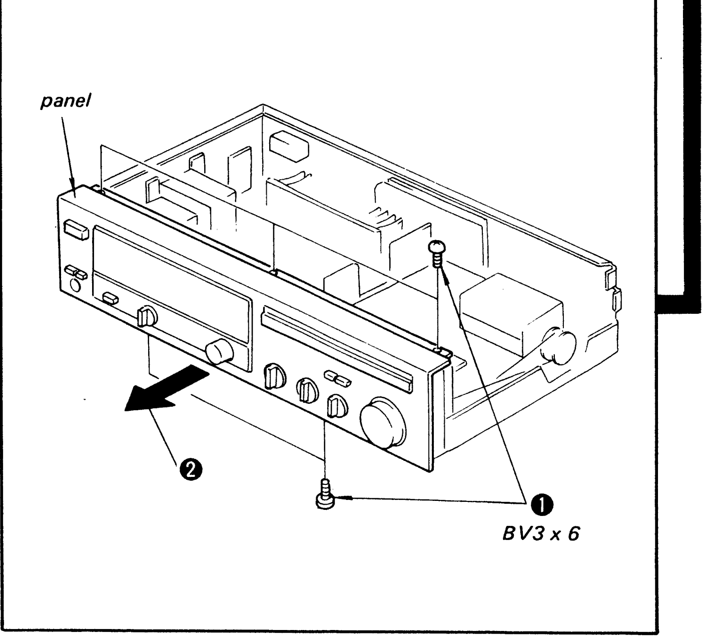
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

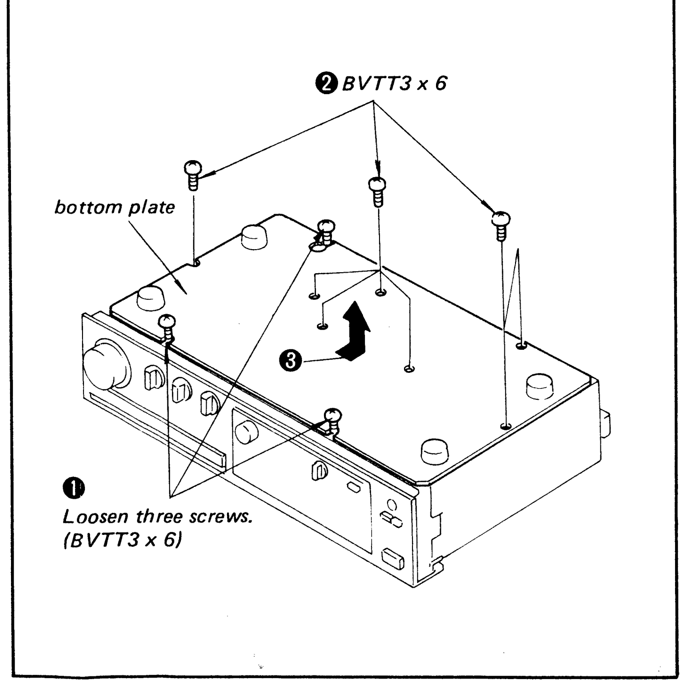
TOP COVER


❷ top cover screw
❸
top cover
❶ top cover screw

PANEL

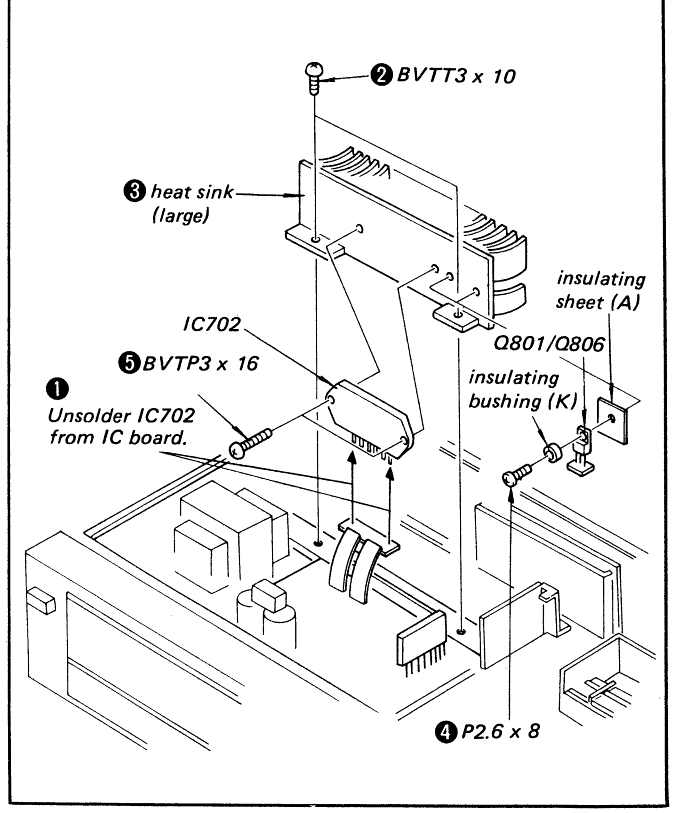

panel
❷
❶
BV3 x 6

BOTTOM PLATE


❷ BVTT3 x 6
bottom plate
❸

❶
Loosen three screws.
(BVTT3 x 6)

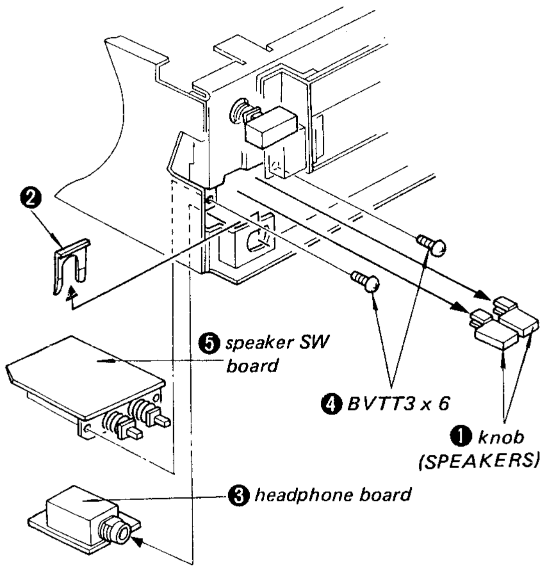
Q801/Q806/IC702


❷ BVTT3 x 10
❸ heat sink (large)
insulating sheet (A)
IC702
❺ BVTP3 x 16
Q801/Q806
insulating bushing (K)
❹ P2.6 x 8

❶
Unsolder IC702
from IC board.

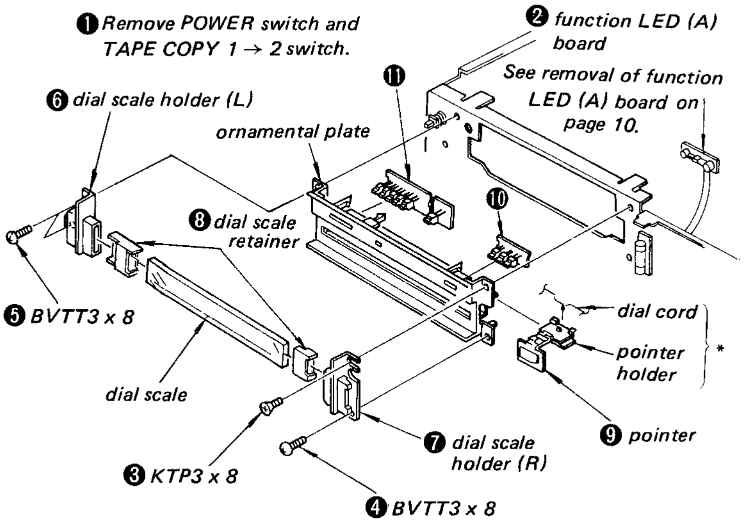
HEADPHONE BOARD/SPEAKER SW BOARD

headphone board: ❶ to ❸
speaker SW board: ❶ to ❺


❷
❺ speaker SW board
❹ BVTT3 x 6
❶ knob (SPEAKERS)
❸ headphone board

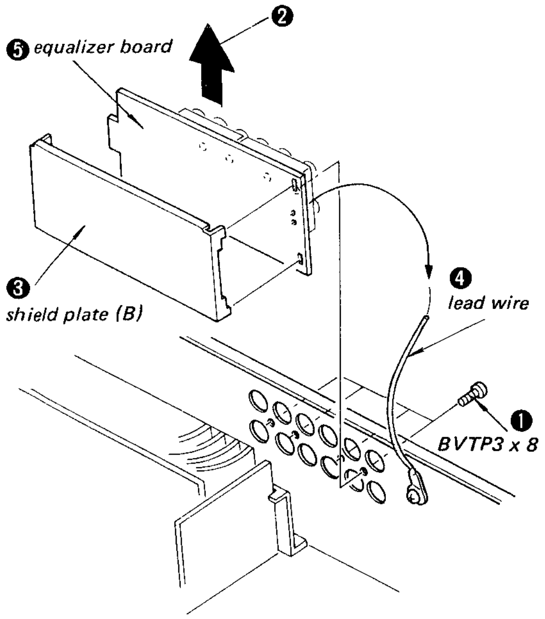
DIAL SCALE/POINTER/ORNAMENTAL PLATE

dial scale: ❶ to ❽
pointer: ❶ to ❾
ornamental plate: ❶ to ⓫

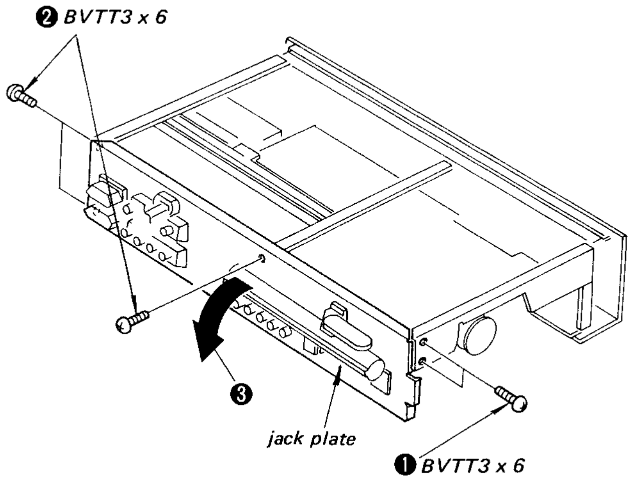

❶ Remove POWER switch and TAPE COPY 1 → 2 switch.
❷ function LED (A) board
See removal of function LED (A) board on page 10.
⓫
❻ dial scale holder (L)
ornamental plate
❿
❽ dial scale retainer
❺ BVTT3 x 8
dial cord
pointer holder
*
dial scale
❾ pointer
❼ dial scale holder (R)
❸ KTP3 x 8
❹ BVTT3 x 8

*Note: Remove parts marked * only when replacing the pointer.*

EQUALIZER BOARD

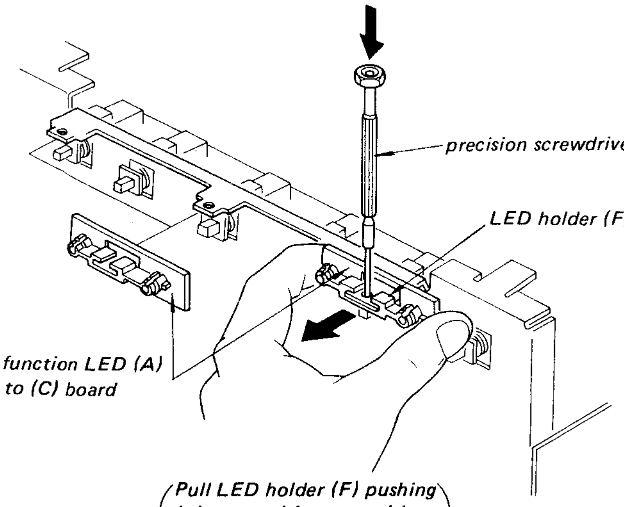

❷
❺ equalizer board
❸ shield plate (B)
❹ lead wire
❶ BVTP3 x 8

JACK PLATE

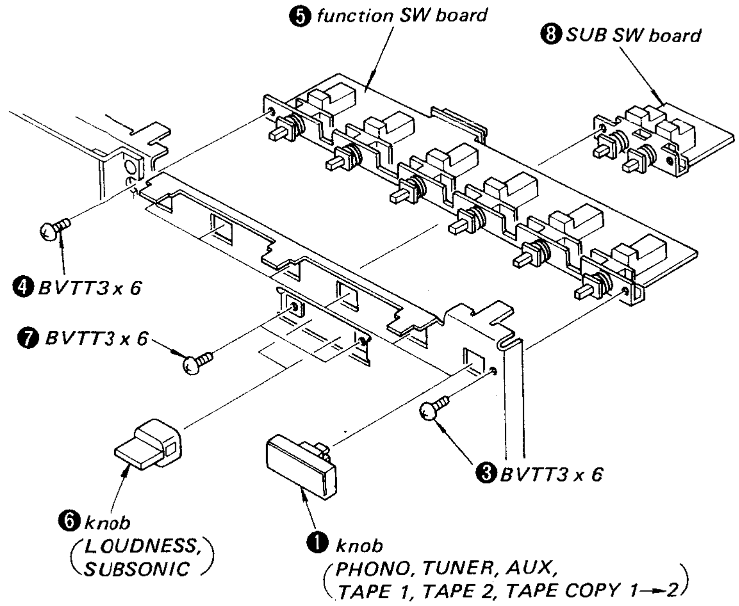

❷ BVTT3 x 6
❸
jack plate
❶ BVTT3 x 6

FUNCTION LED (A) to (C) BOARD/ FUNCTION SW BOARD/SUB SW BOARD

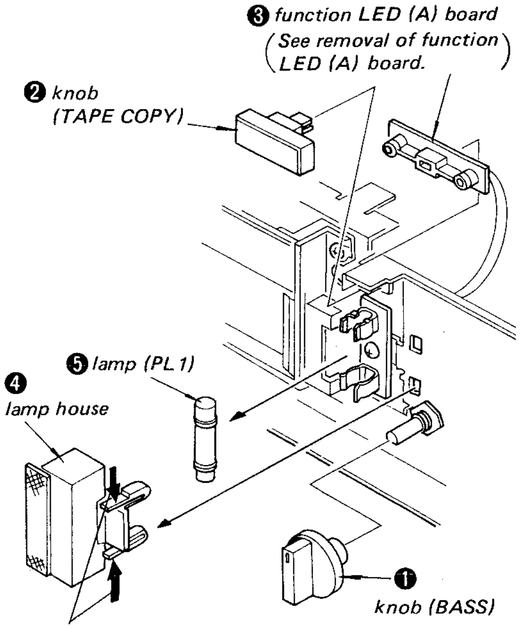
function LED (A) to (C) board: ❶ to ❷
function SW board: ❶ to ❺
SUB SW board: ❻ to ❽


precision screwdriver
LED holder (F)
❷ function LED (A) to (C) board

(Pull LED holder (F) pushing it by a precision screwdriver as shown above.)

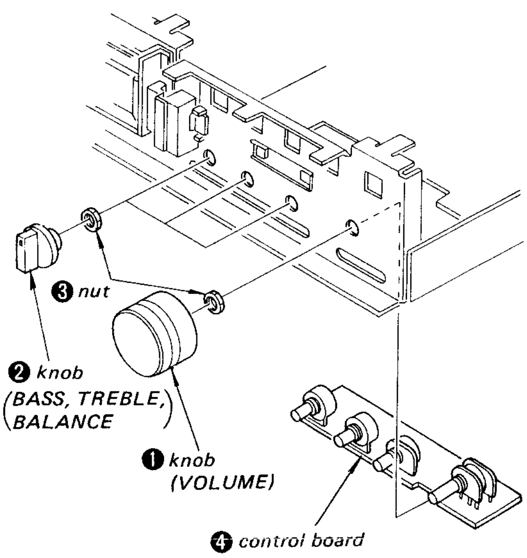

❺ function SW board
❽ SUB SW board
❹ BVTT3 x 6
❼ BVTT3 x 6
❸ BVTT3 x 6
❻ knob (LOUDNESS, SUBSONIC)
❶ knob (PHONO, TUNER, AUX, TAPE 1, TAPE 2, TAPE COPY 1→2)

LAMP (PL1)


❸ function LED (A) board (See removal of function LED (A) board.)
❷ knob (TAPE COPY)
❺ lamp (PL 1)
❹ lamp house
❶ knob (BASS)

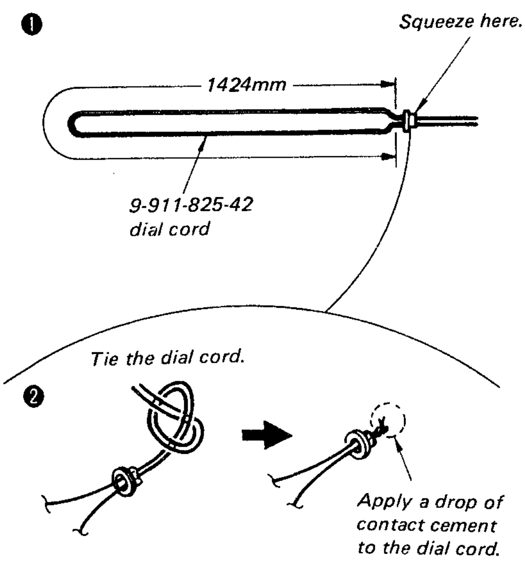
Pull the lamp house pushing hooks.

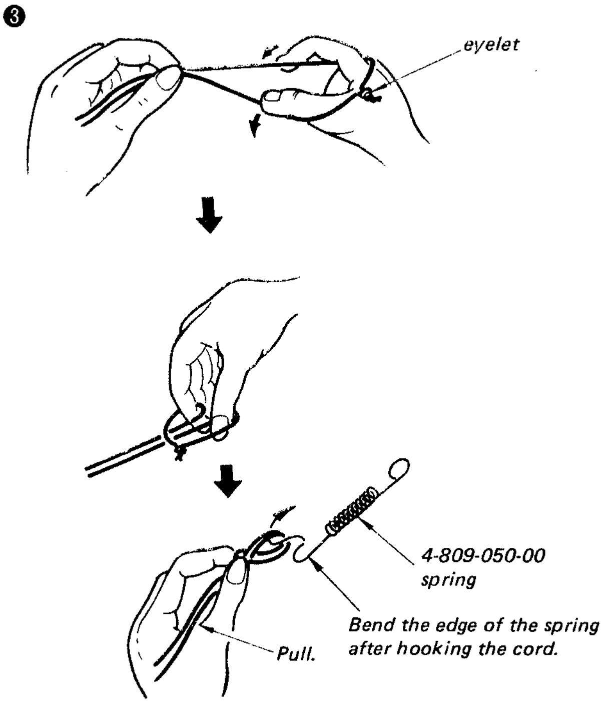
CONTROL BOARD


❸ nut
❷ knob (BASS, TREBLE, BALANCE)
❶ knob (VOLUME)
❹ control board

DIAL CORD STRINGING

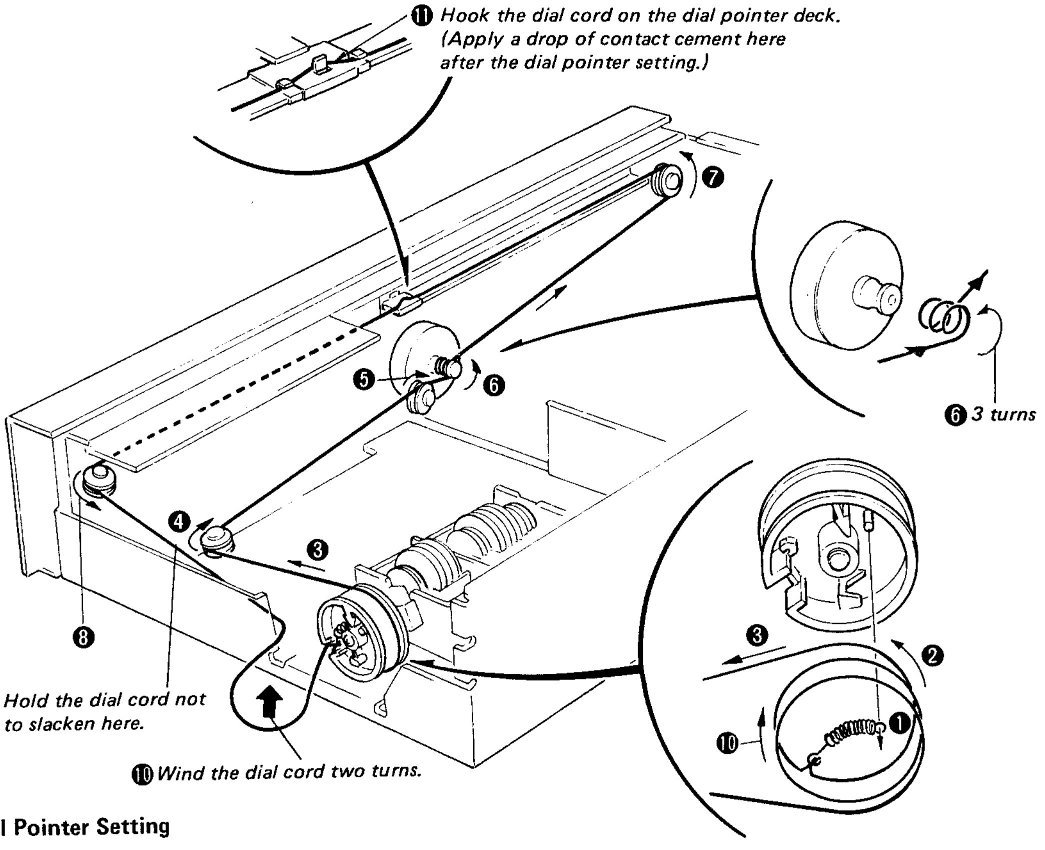
1. Preparation


❶
Squeeze here.
1424mm
9-911-825-42
dial cord
Tie the dial cord.
❷
Apply a drop of
contact cement
to the dial cord.


❸
eyelet
4-809-050-00
spring
Bend the edge of the spring
after hooking the cord.
Pull.

2. Stringing

Turn the tuning capacitor shaft fully clockwise and set the dial drum so that the cutout is positioned as shown below.


⑪ Hook the dial cord on the dial pointer deck.
(Apply a drop of contact cement here
after the dial pointer setting.)
❼
❺
❻
❻ 3 turns
❹
❸
❽
❾ Hold the dial cord not
to slacken here.
❿ Wind the dial cord two turns.
❸
❷
❶
❿

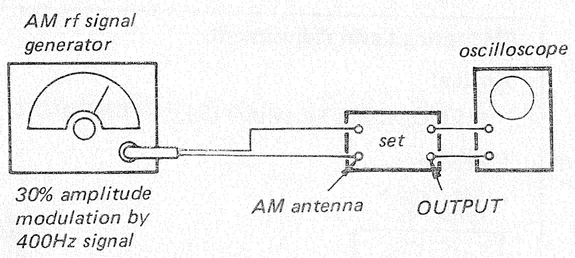
3. Dial Pointer Setting

- Receive the signal (98MHz) from the FM RF SG and set the dial pointer to 98MHz on the dial scale.
- Apply a drop of contact cement to the dial pointer.

MEMO

SECTION 3
ADJUSTMENTS

AM SECTION



Output level: as low as possible

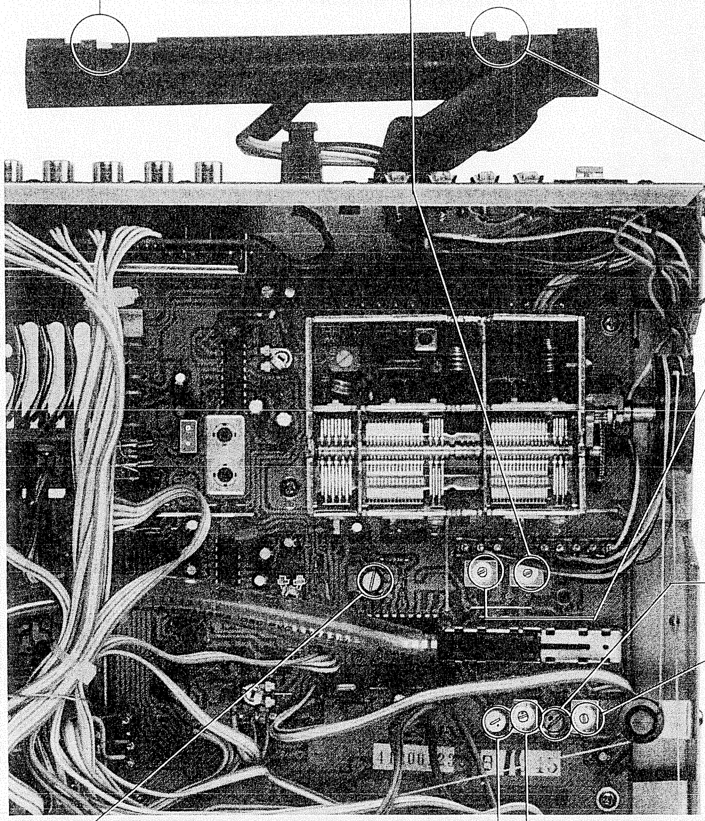
Note:
Tuning and tracking adjustments of LW section should be made earlier than those of MW section.

- Repeat each adjustment several times for maximum reading on oscilloscope.
- The MW/LW tuning adjustments and the tracking adjustment should be finally done by the trimmer capacitor.

MW TRACKING ADJUSTMENT

Perform this adjustment after the LW tracking adjustment.

adjustment parts	frequency of the signal generator
L501	600kHz
CT301	1,400kHz



LW TRACKING ADJUSTMENT

adjustment parts	frequency of the signal generator
L501	170kHz
CT303	310kHz

MW TUNING ADJUSTMENT

Make sure of the dial pointer setting before this adjustment. (Refer to the dial pointer setting on page 11.)

adjustment parts	dial pointer indication	frequency of the signal generator
L302	600kHz	600kHz
CT302	1,400kHz	1,400kHz

LW TUNING ADJUSTMENT

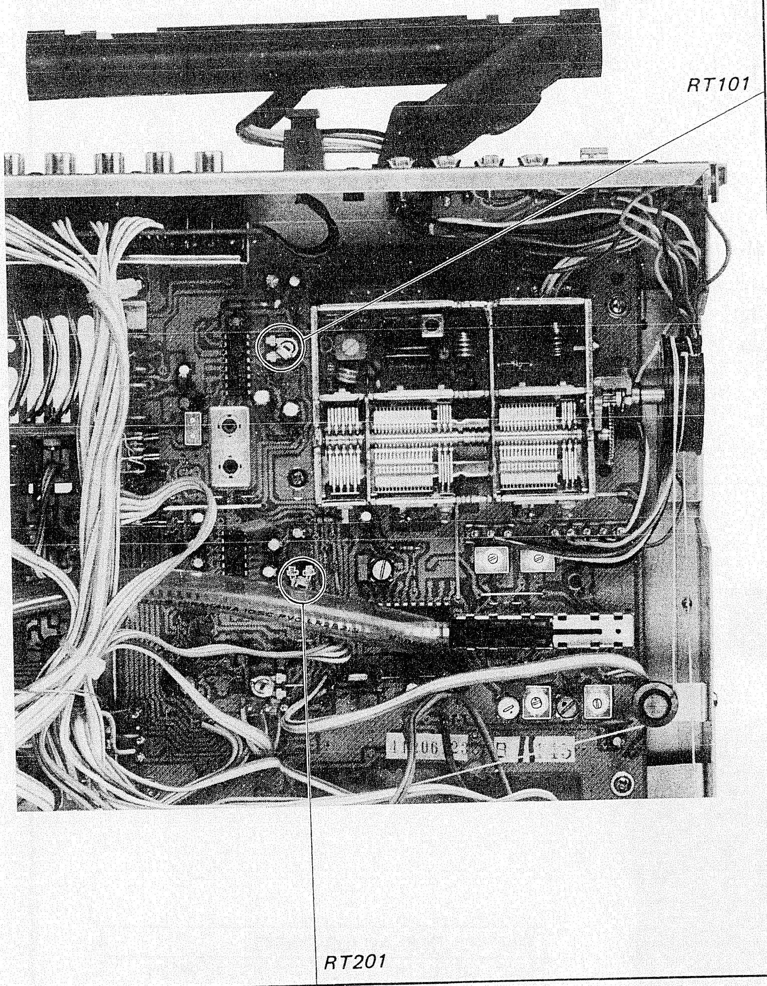
Make sure of the dial pointer setting before this adjustment. (Refer to the dial pointer setting on page 11.)

adjustment parts	dial pointer indication	frequency of the signal generator
CT304	310kHz	310kHz
L303	170kHz	170kHz

IF ALIGNMENT

adjustment part	frequency of the signal generator
T301	1,000kHz

FM SECTION

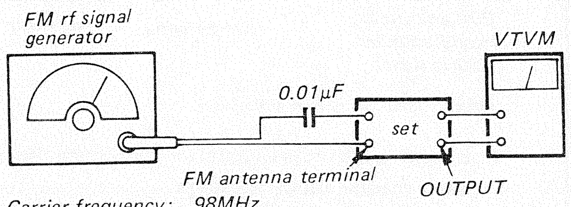

RT101
RT201

FM Muting Level Adjustment

Setting:

FM MODE/MUTE switch (S1): STEREO/ON

Procedure:


FM rf signal generator
VTVM
0.01μF
set
FM antenna terminal
OUTPUT

Carrier frequency: *98MHz*
Modulation: *1kHz, 40kHz deviation (100%)*
Output level: *10μV (20dB)*

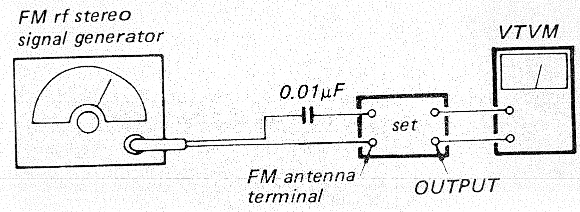
1. Tune the set to 98MHz.
2. Set the output level of the FM rf signal generator to 20dB (10μV).
3. Turn RT101 and stop it just when the VTVM indication suddenly decreases.

FM Stereo Separation Adjustment

Setting:

FM MODE/MUTE switch (S1): STEREO/ON

Procedure:


FM rf stereo signal generator
VTVM
0.01μF
set
FM antenna terminal
OUTPUT

Carrier frequency: *98MHz*
Output level: *1mV (60dB)*
Mode: *stereo*
Modulation:
Audio (1kHz): *16.25kHz deviation*
Pilot (19kHz): *7.5kHz deviation*
Sub-channel (38kHz): *16.25kHz deviation*

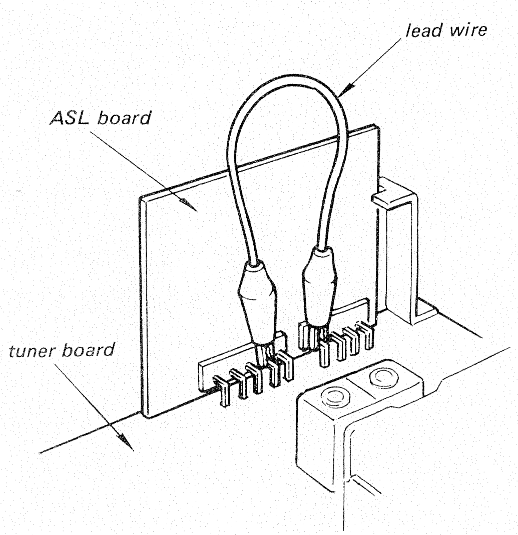
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RT201 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RT201 for minimum reading.

L-CH Stereo Separation: Ⓐ − Ⓑ
R-CH Stereo Separation: Ⓒ − Ⓓ

The separations of both channels should be equal.

HOW TO TURN ASL OFF:

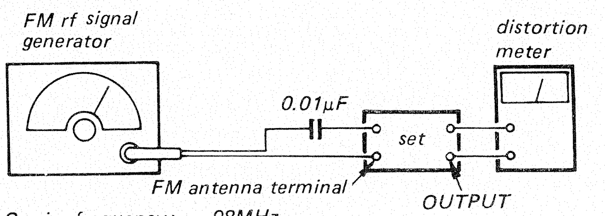
1. FM MODE/MUTE switch: MONO/OFF
2. Connect a lead wire as shown below.


lead wire
ASL board
tuner board

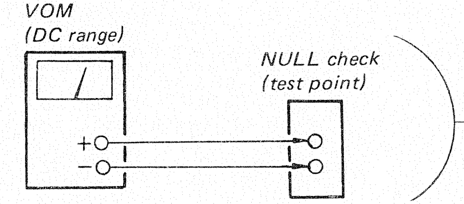
FM Discriminator Alignment

Turn ASL off. (See "How to turn ASL off" on page 15.)

Procedure:


FM rf signal generator
distortion meter
0.01μF
set
FM antenna terminal
OUTPUT

Carrier frequency: 98MHz
Output level: 1mV (60dB)
Modulation(100%): 1kHz, 40kHz deviation
Mode: mono


VOM (DC range)
NULL check (test point)
+
−

1. Tune the set to 98MHz.
2. Connect a VOM to NULL CHECK (test point) and adjust the primary-side core (red) of T101 for 0V DC reading on the VOM.
3. Adjust the secondary-side core (black) of T101 for a minimum reading on the distortion meter.

Note: Repeat the secondary-side and primary-side adjustments several times.

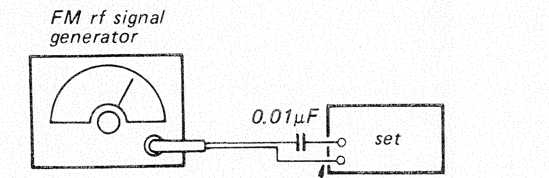
VCO Adjustment

A) Regular Method

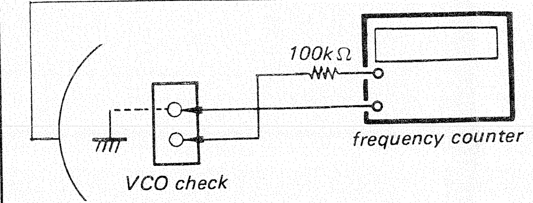
Setting:

Turn ASL off. (See "How to turn ASL off" on page 15.)

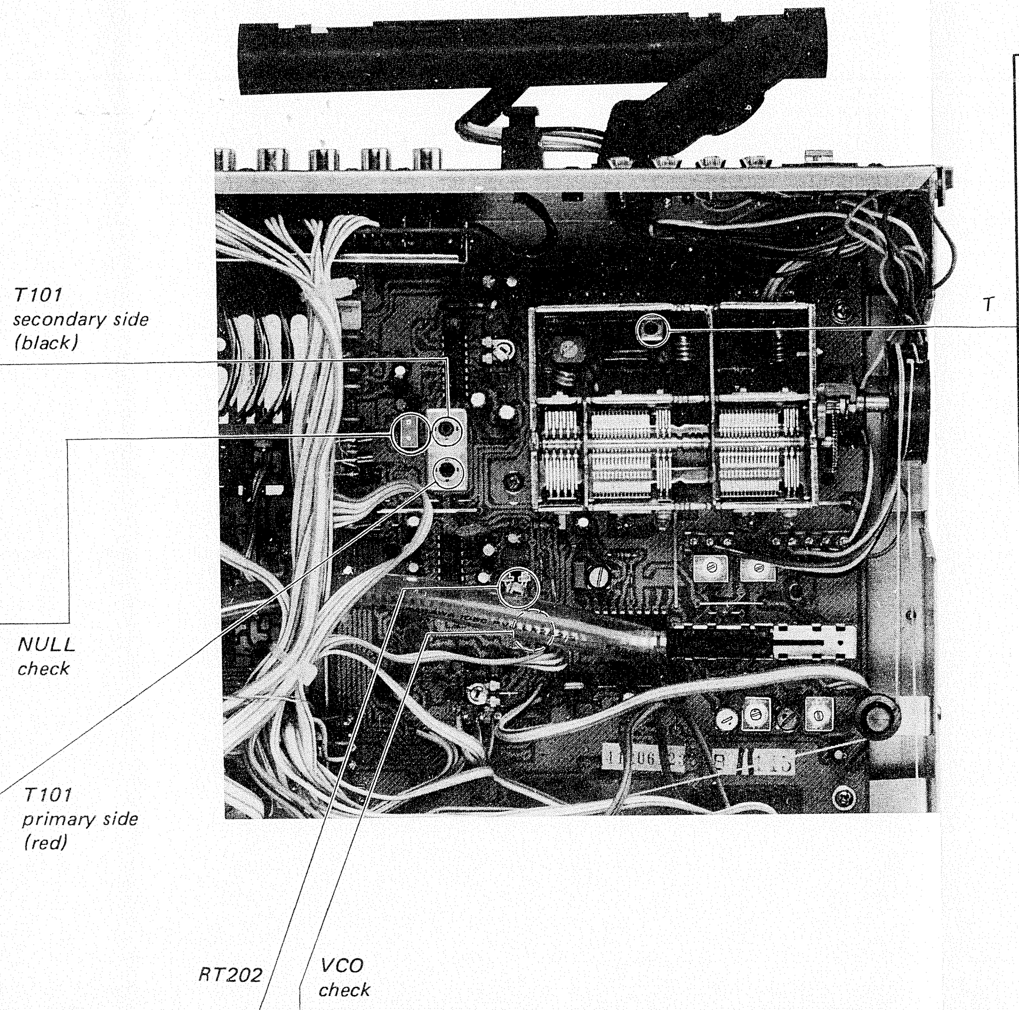
Procedure:


FM rf signal generator
0.01μF
set
FM antenna terminal

Carrier frequency: 98MHz
Modulation: no modulation
Output level: 1mV (60dB)


100kΩ
frequency counter
VCO check

1. Tune the set to 98MHz.
2. Adjust RT202 for 19kHz ± 50Hz on the counter.


T101 secondary side (black)
NULL check
T101 primary side (red)
RT202
VCO check
T

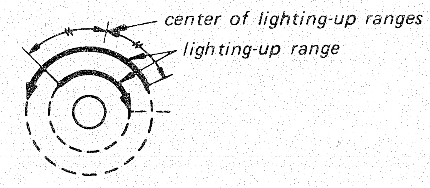
B) Simple Method

Setting:

Turn ASL off. (See "How to turn ASL off" on page 15.)

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RT202 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RT202 at the center of the lighting-up range of both turns as shown below.


center of lighting-up ranges
lighting-up range

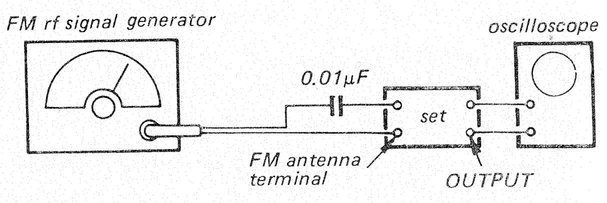
The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement. In case of replacement, perform the following adjustments.

1. Front-End IFT Adjustment.

Setting:

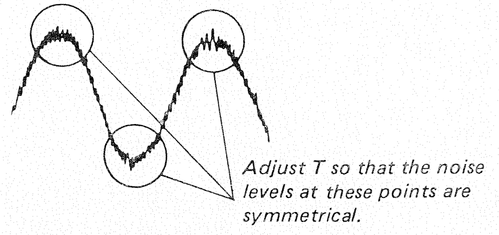
Turn ASL off. (See "How to turn ASL off" on page 15.)

Procedure:

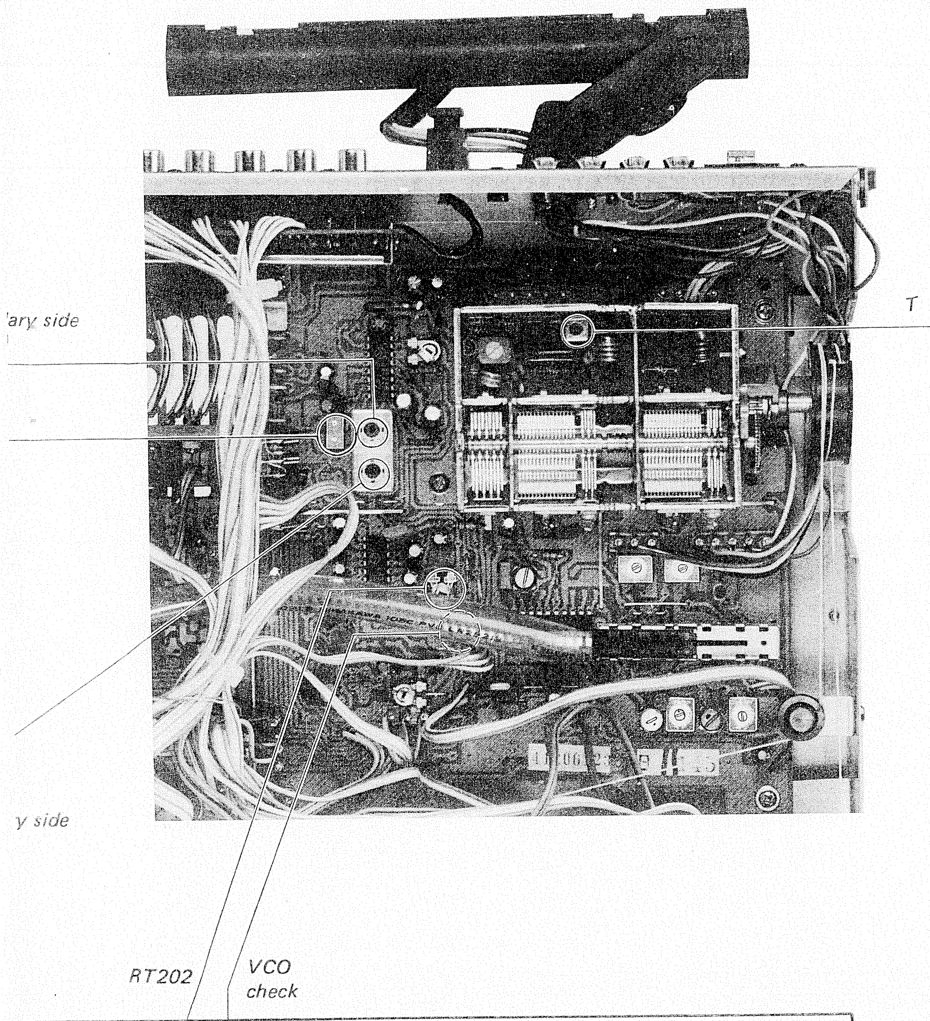

FM rf signal generator
oscilloscope
0.01μF
set
FM antenna terminal
OUTPUT

Carrier frequency: 98MHz
Modulation: 1kHz, 40kHz deviation (100%)
Output level: 2μV (6dB)

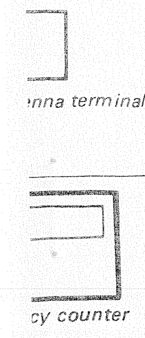
Adjust T so that the noise levels at the peak of the waveforms on the oscilloscope are symmetrical and the output level is maximum.


Adjust T so that the noise levels at these points are symmetrical.

2. Dial Pointer Setting
   (Refer to Dial Pointer Setting on page 11.)
3. MW/LW Tuning Adjustments
   (Refer to MW/LW Tuning Adjustments on page 13.)


ary side
y side
T
RT202
VCO
check

urn ASL off" on


nna terminal
cy counter

Hz on the counter.

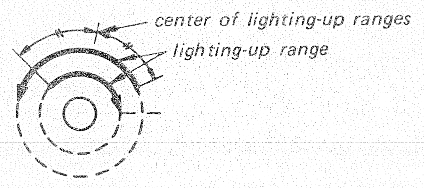
B) Simple Method

Setting:

Turn ASL off. (See "How to turn ASL off" on page 15.)

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RT202 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RT202 at the center of the lighting-up range of both turns as shown below.


center of lighting-up ranges
lighting-up range

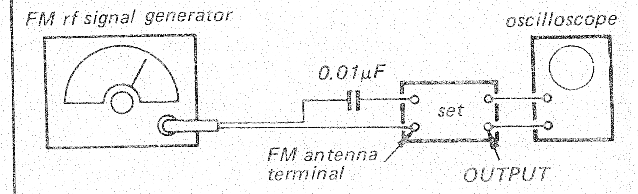
The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement. In case of replacement, perform the following adjustments.

1. Front-End IFT Adjustment.

Setting:

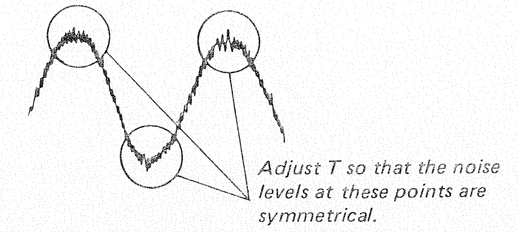
Turn ASL off. (See "How to turn ASL off" on page 15.)

Procedure:


FM rf signal generator
oscilloscope
0.01μF
set
FM antenna terminal
OUTPUT

Carrier frequency: *98MHz*
Modulation: *1kHz, 40kHz deviation (100%)*
Output level: *2μV (6dB)*

Adjust T so that the noise levels at the peak of the waveforms on the oscilloscope are symmetrical and the output level is maximum.


Adjust T so that the noise levels at these points are symmetrical.

2. Dial Pointer Setting
   (Refer to Dial Pointer Setting on page 11.)
3. MW/LW Tuning Adjustments
   (Refer to MW/LW Tuning Adjustments on page 13.)

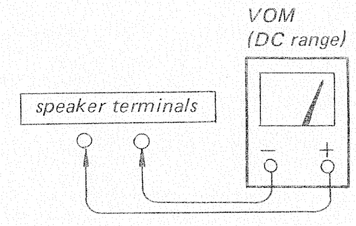
AMP SECTION

Note:

1. DC BALANCE adjustment should be made several minutes after the POWER switch is turned on (POWER ON).
2. After replacing IC701, 702, BALANCE adjustment should be made.

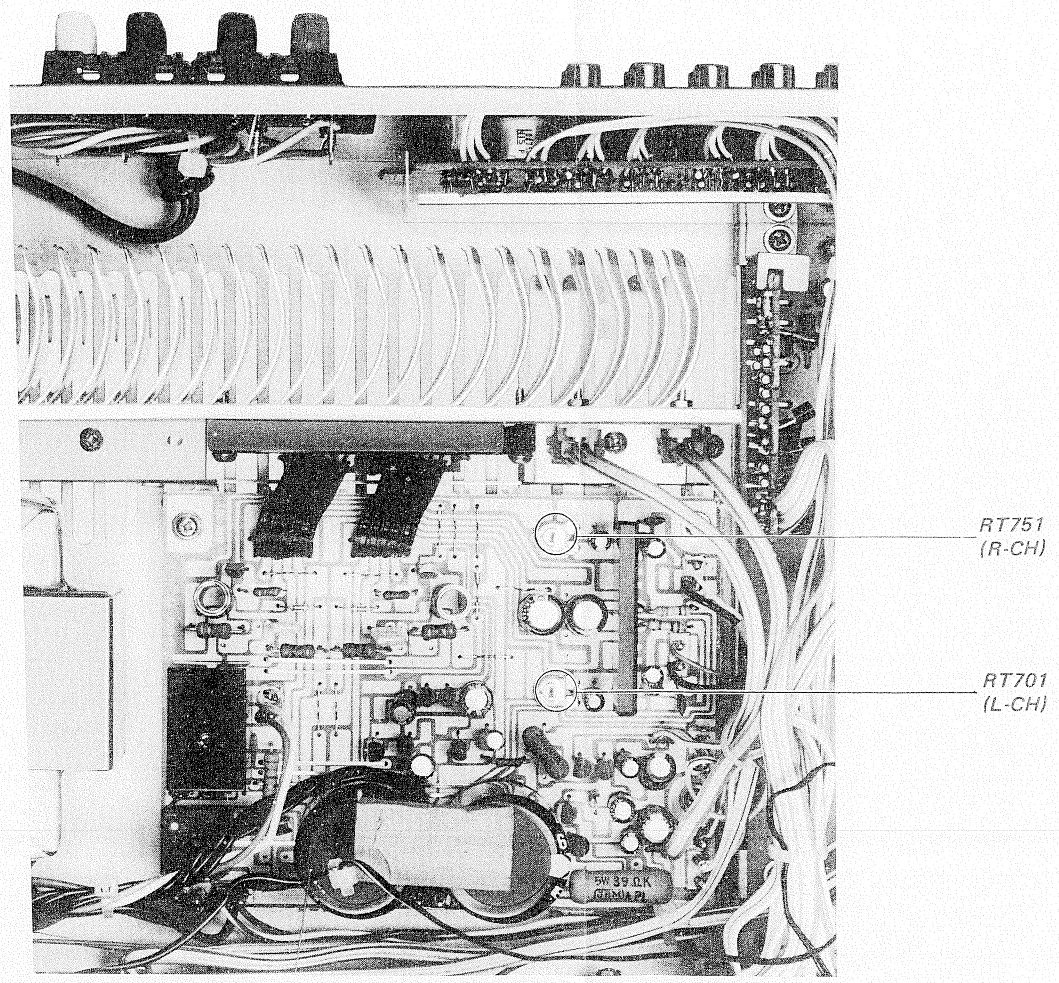
DC Balance Adjustment (with no signal input)

1. Turn Power switch ON. Connect a VOM across speaker terminals.

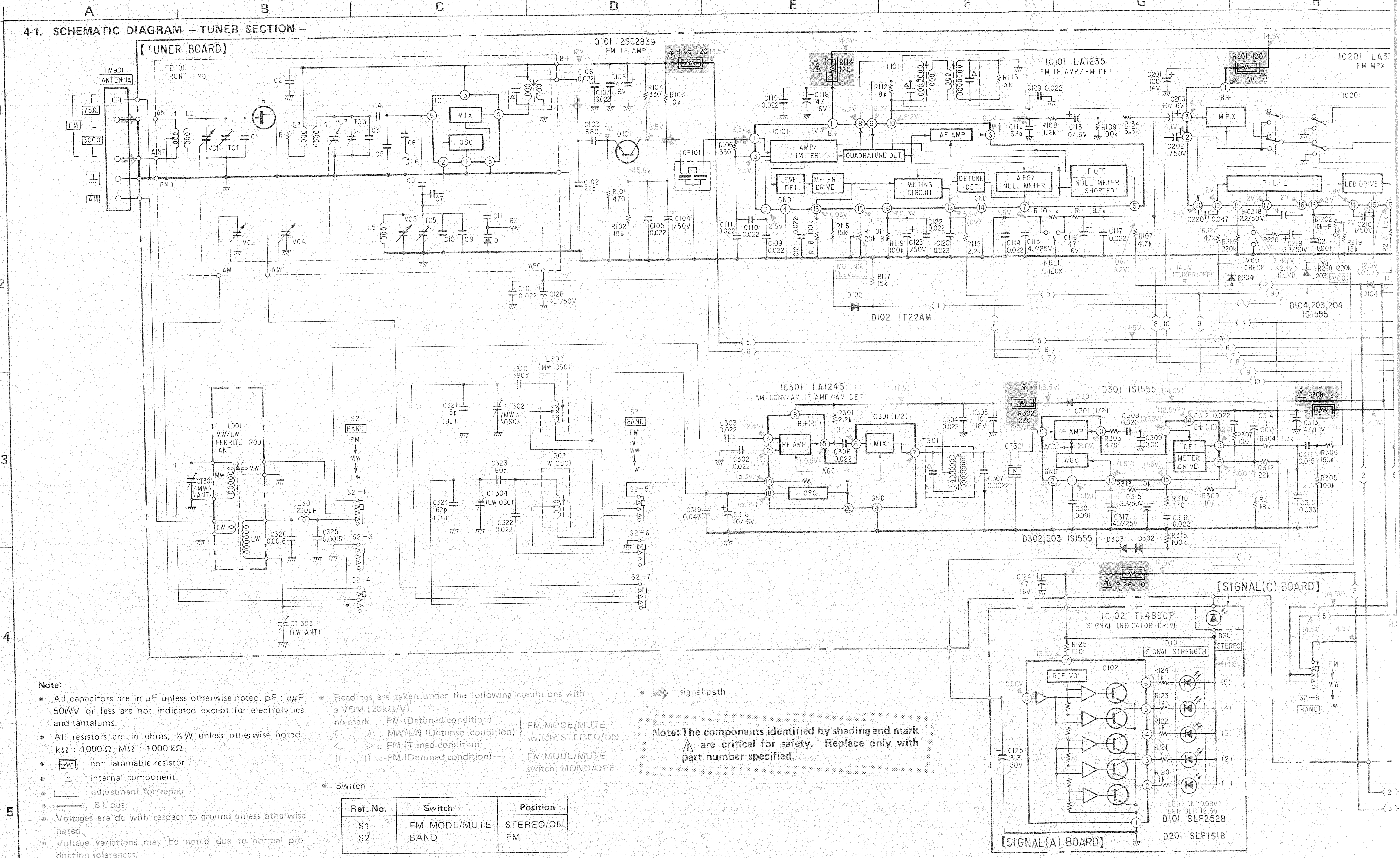

VOM
(DC range)
speaker terminals
–
+

2. Adjust RT701 (L-CH) and RT751 (R-CH) for 0V reading on the VOM.
   (Set the VOM high at first. After obtaining 0V reading, lower the range gradually and adjust RT701 and RT751.)

   adjustment level: 0V ±0.05V


RT751
(R-CH)
RT701
(L-CH)

4-1. SCHEMATIC DIAGRAM – TUNER SECTION –


A
B
C
D
E
F
G
H
1
2
3
4
5
[TUNER BOARD]
TM901 ANTENNA
FM
75Ω
300Ω
AM
FE101 FRONT-END
ANT L1
AINT
GND
L2
TR
VC1
TC1
C1
C2
R
L3
L4
VC3
TC3
C3
C4
C5
C6
L6
C7
C8
IC
MIX
OSC
T
IF
B+
VC2
VC4
VC5
TC5
L5
C10
C9
C11
R2
D
AM
AFC
C101 0.022
C128 2.2/50V
Q101 2SC2839 FM IF AMP
R105 120
C106 0.022
C107 0.022
C108 47 16V
R104 330
R103 10k
C103 680p
Q101
C102 22p
R101 470
R102 10k
C105 0.022
C104 1/50V
CF101
R114 120
T101
R112 18k
R113 3k
C119 0.022
C118 47 16V
R106 330
IC101 LA1235 FM IF AMP/FM DET
IF AMP/LIMITER
QUADRATURE DET
AF AMP
LEVEL DET
METER DRIVE
MUTING CIRCUIT
DETUNE DET
AFC/NULL METER
IF OFF NULL METER SHORTED
C129 0.022
C112 33p
R108 1.2k
C113 10/16V
R109 100k
R134 3.3k
R110 1k
R111 8.2k
C111 0.022
C110 0.022
C109 0.022
C121 0.022
R118 100k
R116 15k
RT101 20k-B
R119 100k
C123 1/50V
C120 0.022
C122 0.022
R115 2.2k
C114 0.022
C115 4.7/25V
C116 47 16V
C117 0.022
R107 4.7k
NULL CHECK
MUTING LEVEL
R117 15k
D102
D102 1T22AM
R201 120
IC201 LA3 FM MPX
MPX
P.L.L
LED DRIVE
C201 100 16V
C203 10/16V
C202 1/50V
C220 0.047
C218 2.2/50V
R227 4.7k
R217 220k
R220
C219 3.3/50V
C217 0.001
R219 15k
RT202 10k-B
C216 1/50V
R218
VCO CHECK
R228 220k
VCO
D204
D203
D104
D104,203,204 1S1555
L302 (MW OSC)
C320 390p
C321 15p (UJ)
CT302 (MW OSC)
L303 (LW OSC)
C323 160p
C324 62p (TH)
CT304 (LW OSC)
C322 0.022
L901 MW/LW FERRITE-ROD ANT
CT301 (MW ANT)
MW
LW
L301 220μH
C326 0.0018
C325 0.0015
CT303 (LW ANT)
S2 BAND
S2-1
S2-3
S2-4
S2-5
S2-6
S2-7
IC301 LA1245 AM CONV/AM IF AMP/AM DET
C303 0.022
C302 0.022
R301 2.2k
B+(RF)
RF AMP
C306 0.022
MIX
OSC
AGC
GND
C319 0.047
C318 10/16V
T301
C304 0.022
C305 10 16V
R302 220
CF301
C307 0.0022
D301 1S1555
D301
IF AMP
C308 0.022
R303 470
C309 0.001
C312 0.022
B+(IF)
DET
METER DRIVE
R307 100
R304 3.3k
C314 1 50V
R308 120
C313 47/16V
C311 0.015
R306 150k
R312 22k
R305 100k
R311 18k
C310 0.033
R313 10k
C315 3.3/50V
R310 270
R309 10k
C301 0.001
C317 4.7/25V
C316 0.022
R315 100k
D302,303 1S1555
D303
D302
C124 47 16V
R126 10
[SIGNAL(C) BOARD]
IC102 TL489CP SIGNAL INDICATOR DRIVE
D201 STEREO
D101 SIGNAL STRENGTH
R125 150
IC102
REF VOL
R124 1k
R123 1k
R122 1k
R121 1k
R120 1k
C125 3.3 50V
LED ON :0.08V
LED OFF:12.5V
D101 SLP252B
D201 SLP151B
[SIGNAL(A) BOARD]
S2-8 BAND
FM
MW
LW

Note:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼ W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ▭ : nonflammable resistor.
- △ : internal component.
- ▭ : adjustment for repair.
- ——— : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- Readings are taken under the following conditions with a VOM (20kΩ/V).

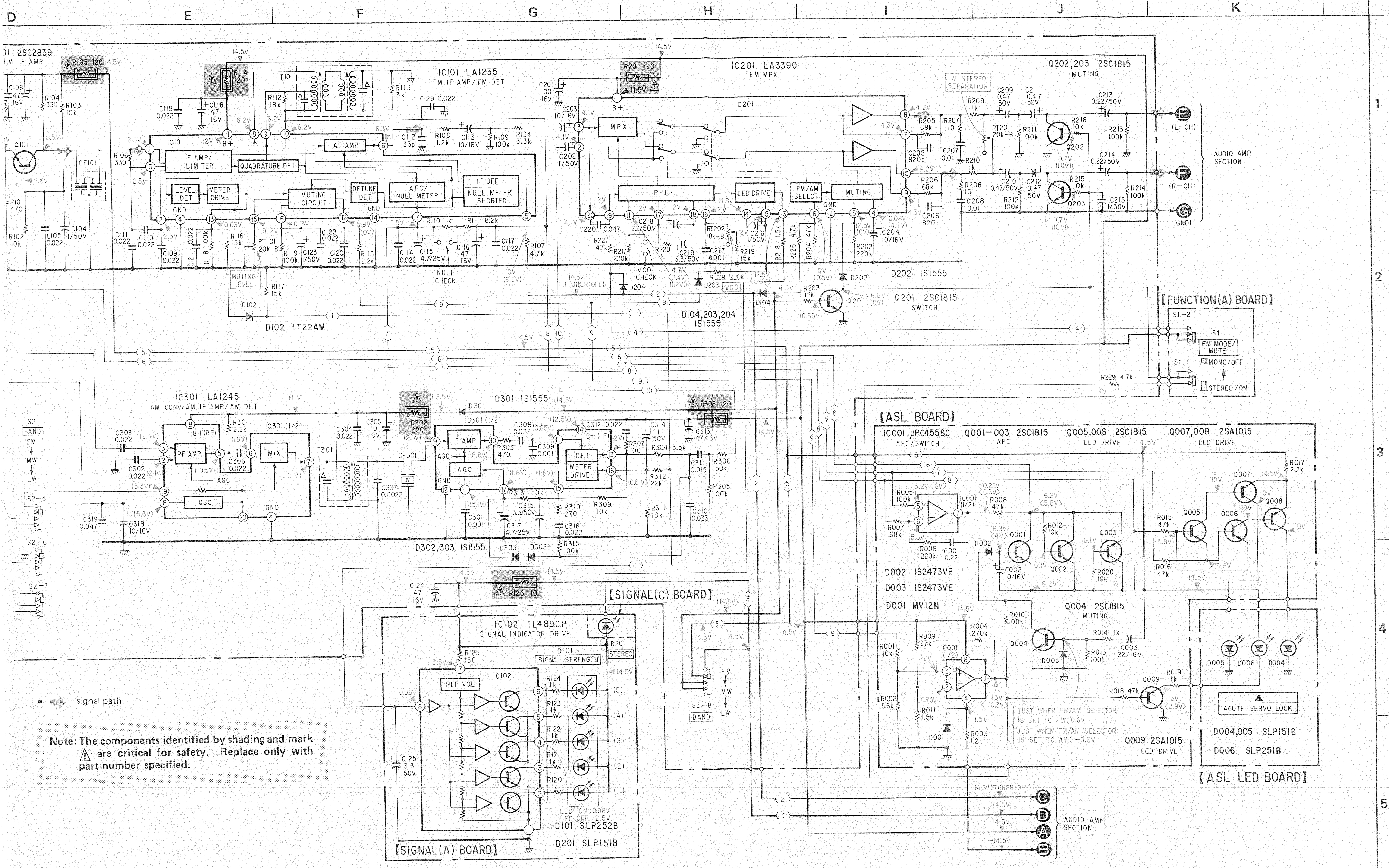
no mark : FM (Detuned condition)
( ) : MW/LW (Detuned condition)
< > : FM (Tuned condition)
} FM MODE/MUTE switch: STEREO/ON
(( )) : FM (Detuned condition) ------ FM MODE/MUTE switch: MONO/OFF

- Switch

Ref. No.	Switch	Position
S1	FM MODE/MUTE	STEREO/ON
S2	BAND	FM

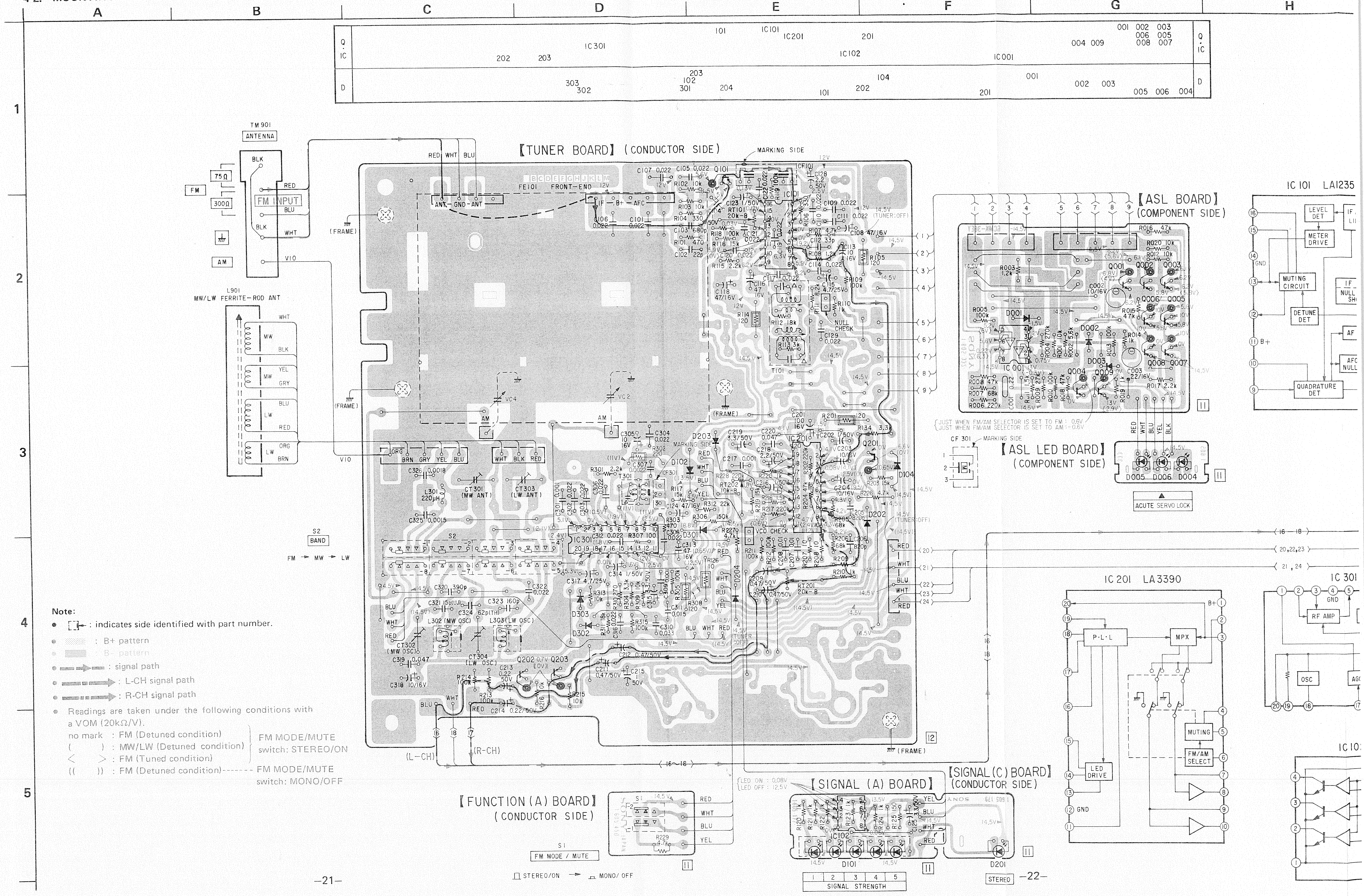
- ➡ : signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.


D
E
F
G
H
I
J
K
1
2
3
4
5
Q101 2SC2839
FM IF AMP
IC101 LA1235
FM IF AMP / FM DET
IF AMP/ LIMITER
QUADRATURE DET
AF AMP
LEVEL DET
METER DRIVE
MUTING CIRCUIT
DETUNE DET
AFC/ NULL METER
IF OFF NULL METER SHORTED
MUTING LEVEL
NULL CHECK
D102 1T22AM
IC201 LA3390
FM MPX
MPX
P·L·L
LED DRIVE
FM/AM SELECT
MUTING
VCO CHECK
FM STEREO SEPARATION
Q202,203 2SC1815
MUTING
D202 1S1555
Q201 2SC1815
SWITCH
D104,203,204 1S1555
AUDIO AMP SECTION
(L-CH)
(R-CH)
(GND)
[FUNCTION(A) BOARD]
S1 FM MODE/ MUTE
MONO/OFF
STEREO/ON
IC301 LA1245
AM CONV/AM IF AMP/AM DET
RF AMP
MIX
OSC
AGC
IF AMP
DET METER DRIVE
D301 1S1555
D302,303 1S1555
S2 BAND
FM
MW
LW
[SIGNAL(C) BOARD]
IC102 TL489CP
SIGNAL INDICATOR DRIVE
REF VOL
D101 SIGNAL STRENGTH
D201 STEREO
LED ON: 0.08V
LED OFF: 12.5V
D101 SLP252B
D201 SLP151B
[SIGNAL(A) BOARD]
S2-8 BAND
[ASL BOARD]
IC001 μPC4558C
AFC/SWITCH
Q001-003 2SC1815
AFC
Q005,006 2SC1815
LED DRIVE
Q007,008 2SA1015
LED DRIVE
D002 1S2473VE
D003 1S2473VE
D001 MV12N
Q004 2SC1815
MUTING
JUST WHEN FM/AM SELECTOR IS SET TO FM: 0.6V
JUST WHEN FM/AM SELECTOR IS SET TO AM: -0.6V
Q009 2SA1015
LED DRIVE
ACUTE SERVO LOCK
D004,005 SLP151B
D006 SLP251B
[ASL LED BOARD]
14.5V (TUNER: OFF)
AUDIO AMP SECTION
: signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

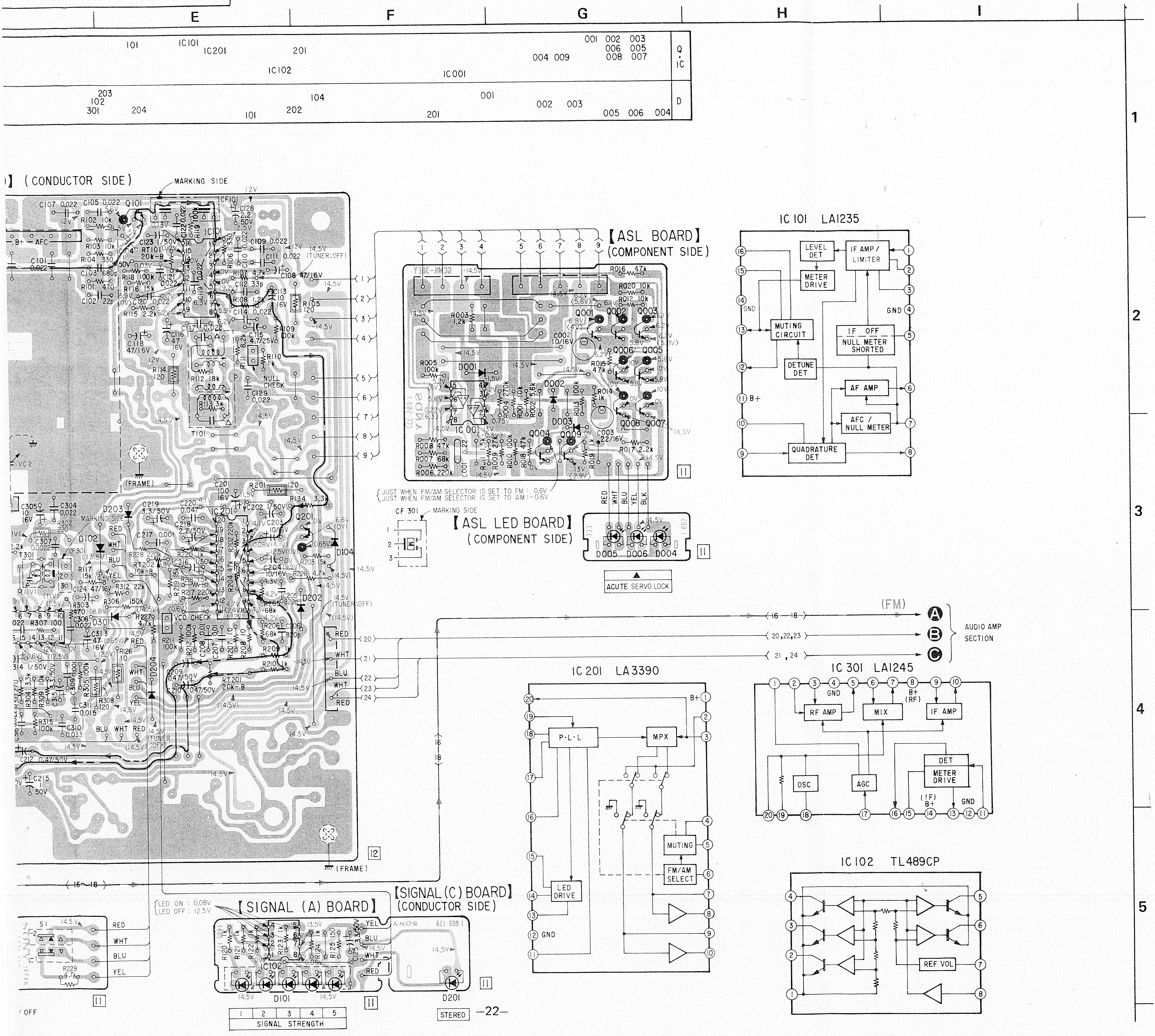
4-2. MOUNTING DIAGRAM – TUNER SECTION –


A
B
C
D
E
F
G
H
1
2
3
4
5
TM901
ANTENNA
75Ω
300Ω
FM
AM
FM INPUT
L901
MW/LW FERRITE-ROD ANT
S2
BAND
FM → MW → LW
【TUNER BOARD】 (CONDUCTOR SIDE)
MARKING SIDE
FE101 FRONT-END
(FRAME)
IC301
IC101
IC201
IC102
IC001
【ASL BOARD】 (COMPONENT SIDE)
【ASL LED BOARD】 (COMPONENT SIDE)
ACUTE SERVO LOCK
CF 301
JUST WHEN FM/AM SELECTOR IS SET TO FM : 0.6V
JUST WHEN FM/AM SELECTOR IS SET TO AM : -0.6V
【SIGNAL (C) BOARD】 (CONDUCTOR SIDE)
【SIGNAL (A) BOARD】
LED ON : 0.08V
LED OFF : 12.5V
SIGNAL STRENGTH
D101
D201
STEREO
【FUNCTION (A) BOARD】 (CONDUCTOR SIDE)
S1
FM MODE / MUTE
STEREO/ON → MONO/ OFF
(L-CH)
(R-CH)
IC 101 LA1235
LEVEL DET
METER DRIVE
MUTING CIRCUIT
DETUNE DET
QUADRATURE DET
B+
GND
IC 201 LA3390
P·L·L
MPX
MUTING
FM/AM SELECT
LED DRIVE
GND
IC 301
RF AMP
OSC
GND

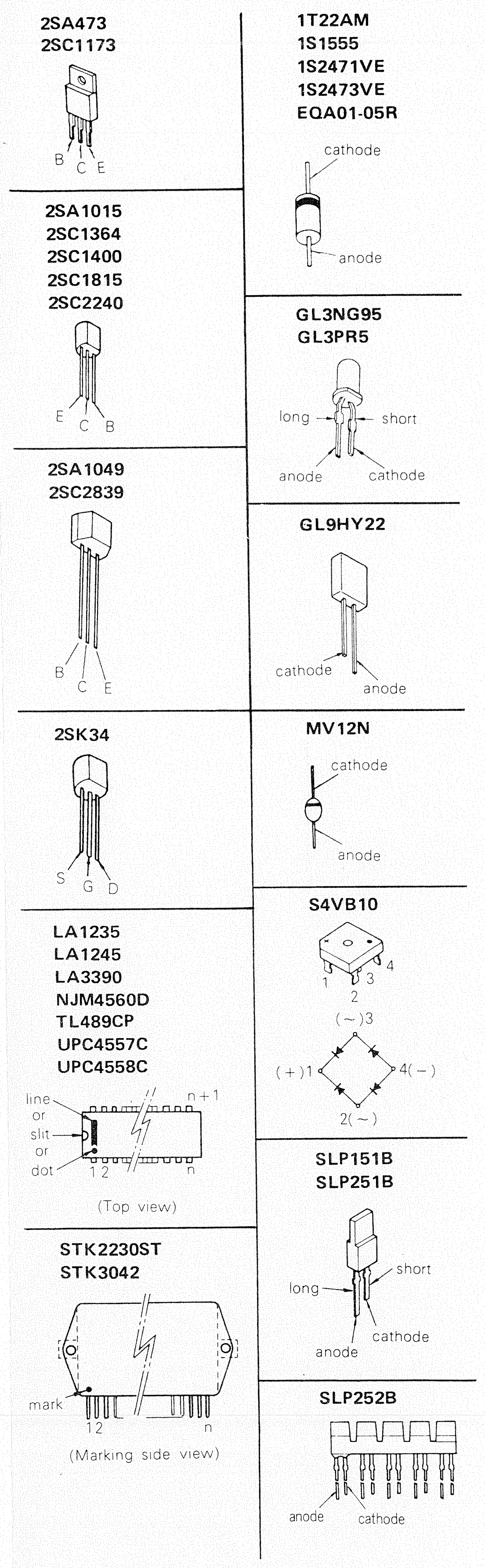
Note:

- [ ]← : indicates side identified with part number.
- ▨ : B+ pattern
- ▨ : B– pattern
- ➡ : signal path
- ➡ : L-CH signal path
- ➡ : R-CH signal path
- Readings are taken under the following conditions with a VOM (20kΩ/V).

no mark : FM (Detuned condition) } FM MODE/MUTE switch: STEREO/ON
( ) : MW/LW (Detuned condition)
< > : FM (Tuned condition)
(( )) : FM (Detuned condition)------- FM MODE/MUTE switch: MONO/OFF

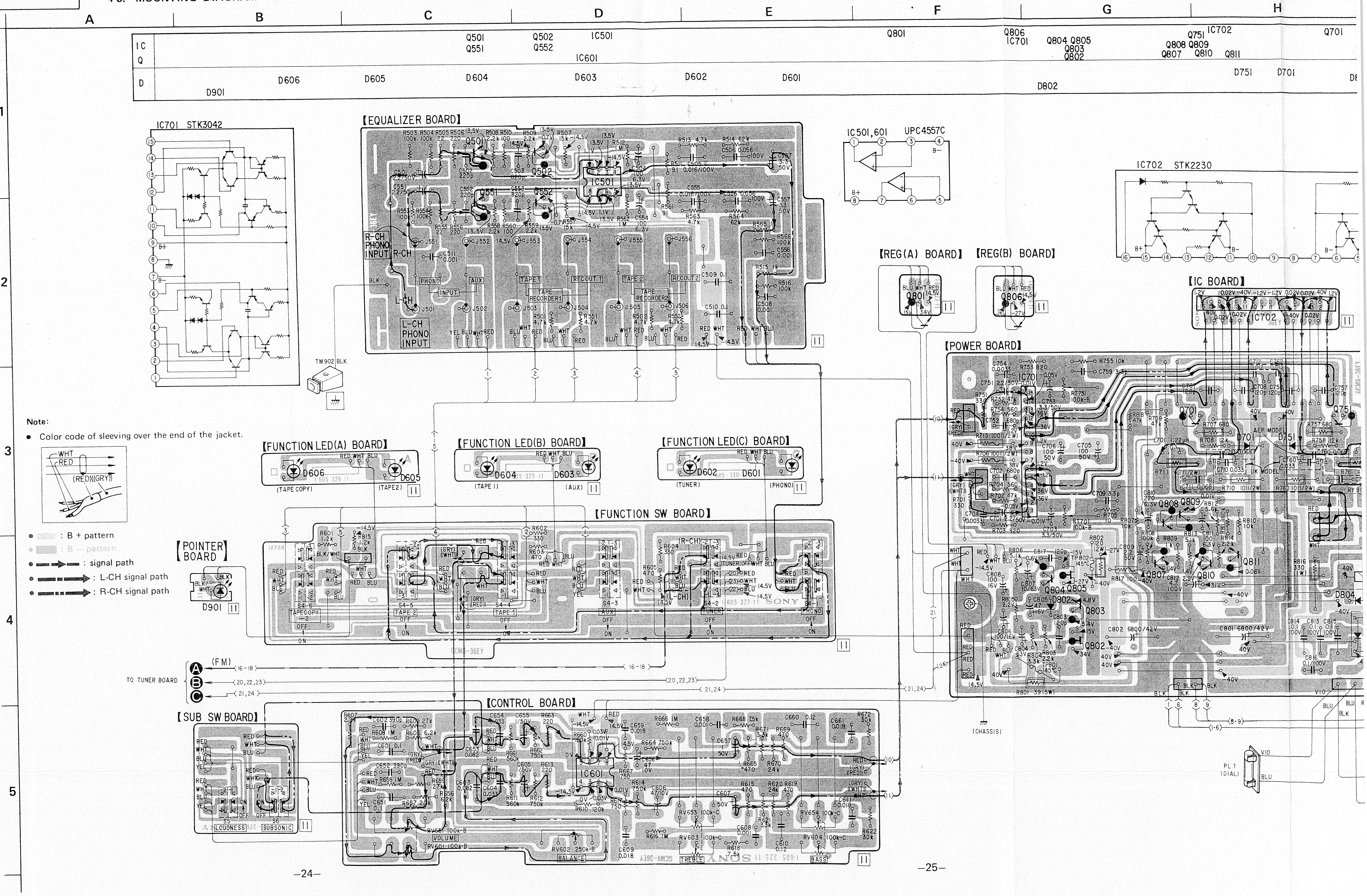

E
F
G
H
I
Q · IC
D
1
2
3
4
5
(CONDUCTOR SIDE)
MARKING SIDE
【ASL BOARD】
(COMPONENT SIDE)
【ASL LED BOARD】
(COMPONENT SIDE)
CF 301
ACUTE SERVO LOCK
JUST WHEN FM/AM SELECTOR IS SET TO FM: 0.6V
JUST WHEN FM/AM SELECTOR IS SET TO AM: −0.6V
(FM)
AUDIO AMP SECTION
【SIGNAL (A) BOARD】
【SIGNAL (C) BOARD】
(CONDUCTOR SIDE)
LED ON: 0.08V
LED OFF: 12.5V
SIGNAL STRENGTH
STEREO
IC 101 LA1235
LEVEL DET
IF AMP / LIMITER
METER DRIVE
MUTING CIRCUIT
IF OFF NULL METER SHORTED
DETUNE DET
AF AMP
AFC / NULL METER
QUADRATURE DET
IC 201 LA3390
P-L-L
MPX
MUTING
FM/AM SELECT
LED DRIVE
IC 301 LA1245
RF AMP
MIX
IF AMP
OSC
AGC
DET
METER DRIVE
IC 102 TL489CP
REF VOL

Semiconductor Lead Layouts


2SA473
2SC1173
B C E
2SA1015
2SC1364
2SC1400
2SC1815
2SC2240
E C B
2SA1049
2SC2839
B C E
2SK34
S G D
LA1235
LA1245
LA3390
NJM4560D
TL489CP
UPC4557C
UPC4558C
line or slit or dot
1 2
n
n+1
(Top view)
STK2230ST
STK3042
mark
1 2
n
(Marking side view)
1T22AM
1S1555
1S2471VE
1S2473VE
EQA01-05R
cathode
anode
GL3NG95
GL3PR5
long
short
anode
cathode
GL9HY22
cathode
anode
MV12N
cathode
anode
S4VB10
1 2 3 4
(−)3
(+)1
4(−)
2(∼)
SLP151B
SLP251B
long
short
anode
cathode
SLP252B
anode
cathode

4-3. MOUNTING DIAGRAM – AMP SECTION –

Semiconductor Lead Layouts: See page 23.

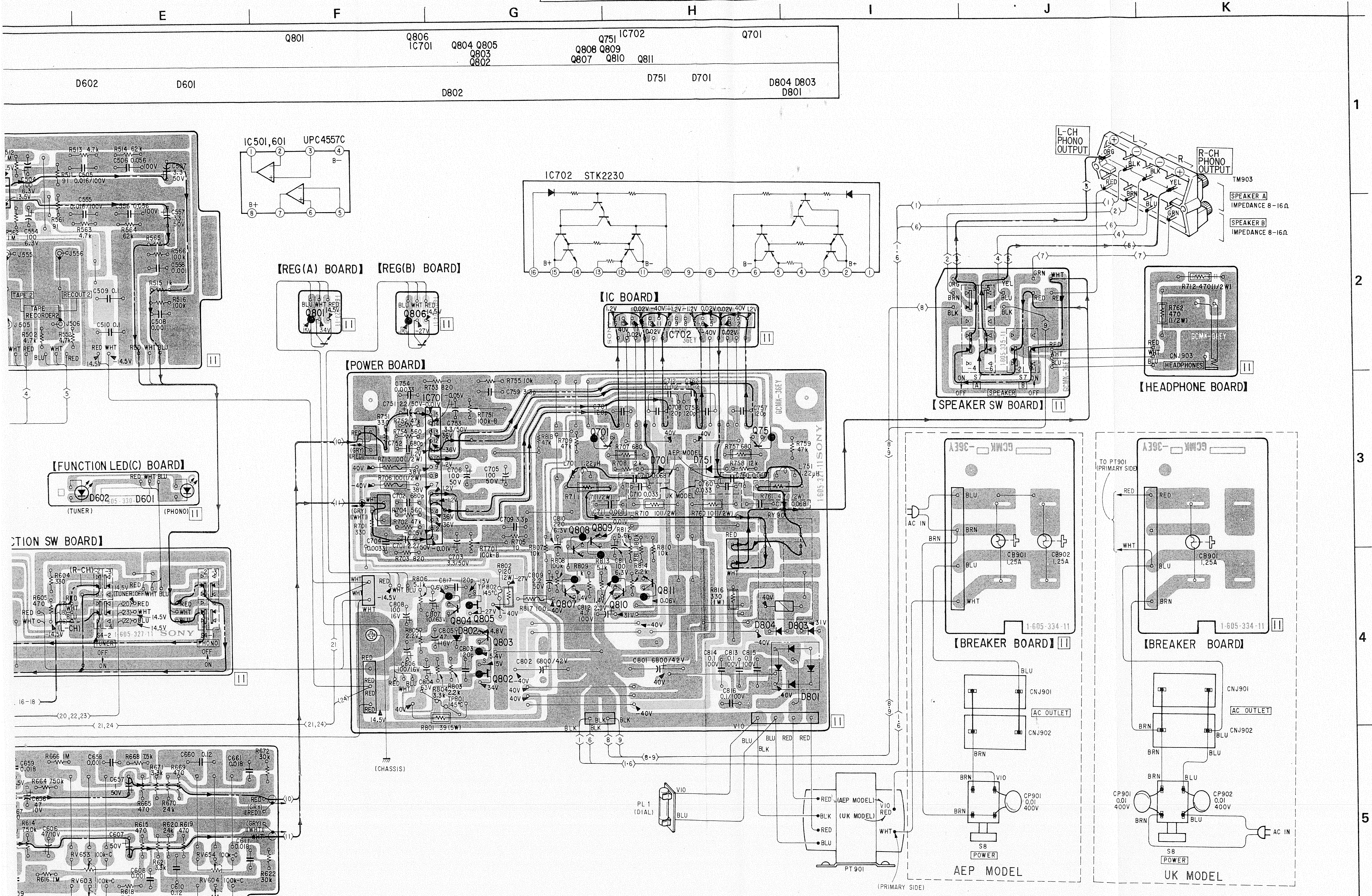

A
B
C
D
E
F
G
H
1
2
3
4
5
IC
Q
D
Q501 Q551
Q502 Q552
IC501
IC601
Q801
Q806 IC701
Q804 Q805 Q803 Q802
Q751 IC702 Q808 Q809 Q807 Q810 Q811
Q701
D901
D606
D605
D604
D603
D602
D601
D802
D751
D701
IC701 STK3042
【EQUALIZER BOARD】
IC501,601 UPC4557C
IC702 STK2230
【REG(A) BOARD】
【REG(B) BOARD】
【IC BOARD】
【POWER BOARD】
【FUNCTION LED(A) BOARD】
【FUNCTION LED(B) BOARD】
【FUNCTION LED(C) BOARD】
【FUNCTION SW BOARD】
【POINTER BOARD】
【SUB SW BOARD】
【CONTROL BOARD】
R-CH PHONO INPUT
L-CH PHONO INPUT
PHONO
INPUT
AUX
TAPE 1
TAPE RECORDER 1
REC OUT 1
TAPE 2
TAPE RECORDER 2
REC OUT 2
(TAPE COPY)
(TAPE 2)
(TAPE 1)
(AUX)
(TUNER)
(PHONO)
TAPE COPY
TAPE 2
TAPE 1
AUX
TUNER
PHONO
LOUDNESS
SUBSONIC
VOLUME
BALANCE
TREBLE
BASS
TO TUNER BOARD
A (FM)
B
C
(CHASSIS)
PL 1 (DIAL)
TM902 BLK
AEP MODEL
UK MODEL

Note:

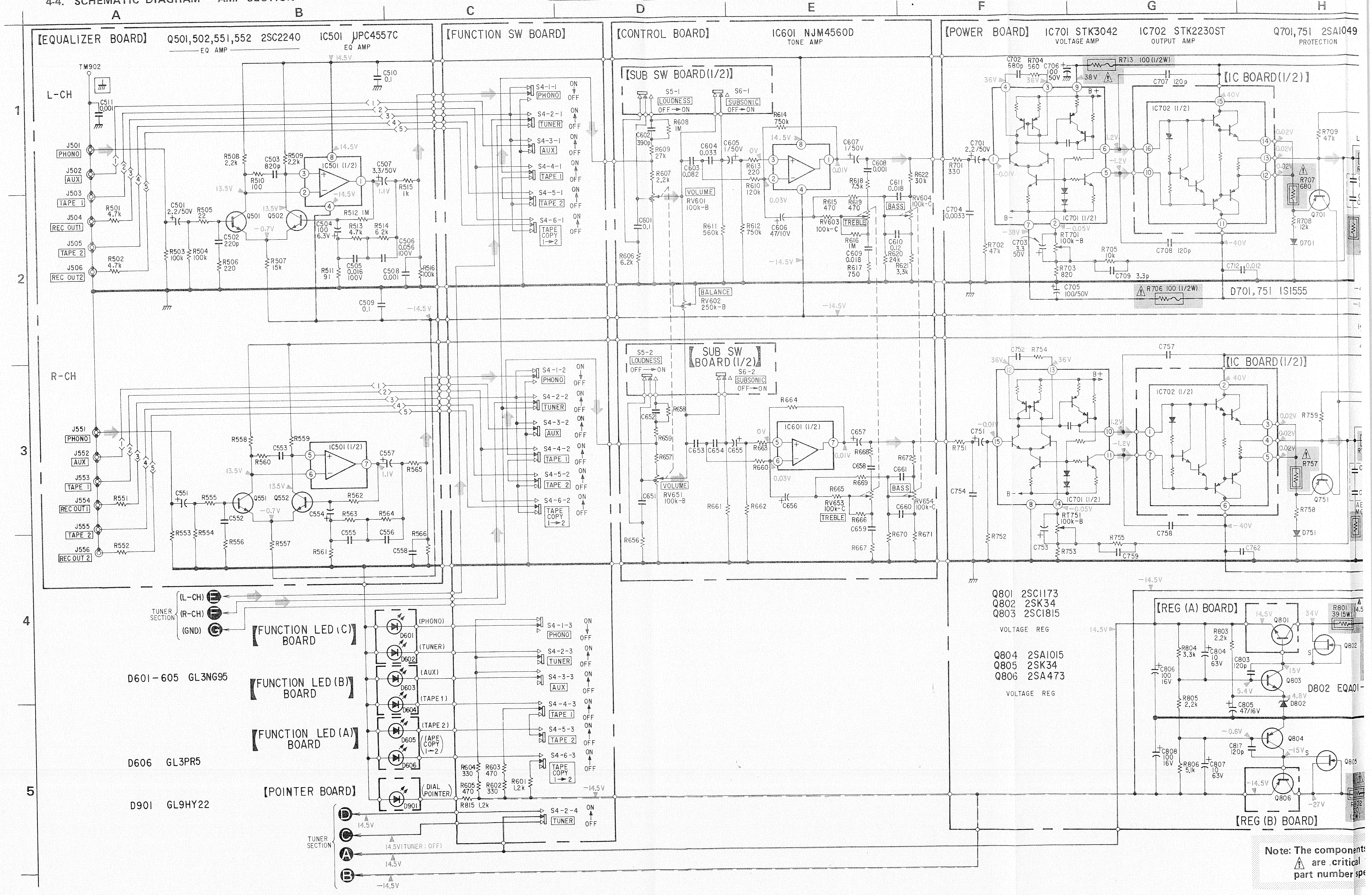
- Color code of sleeving over the end of the jacket.

WHT
RED
(RED)(GRY)

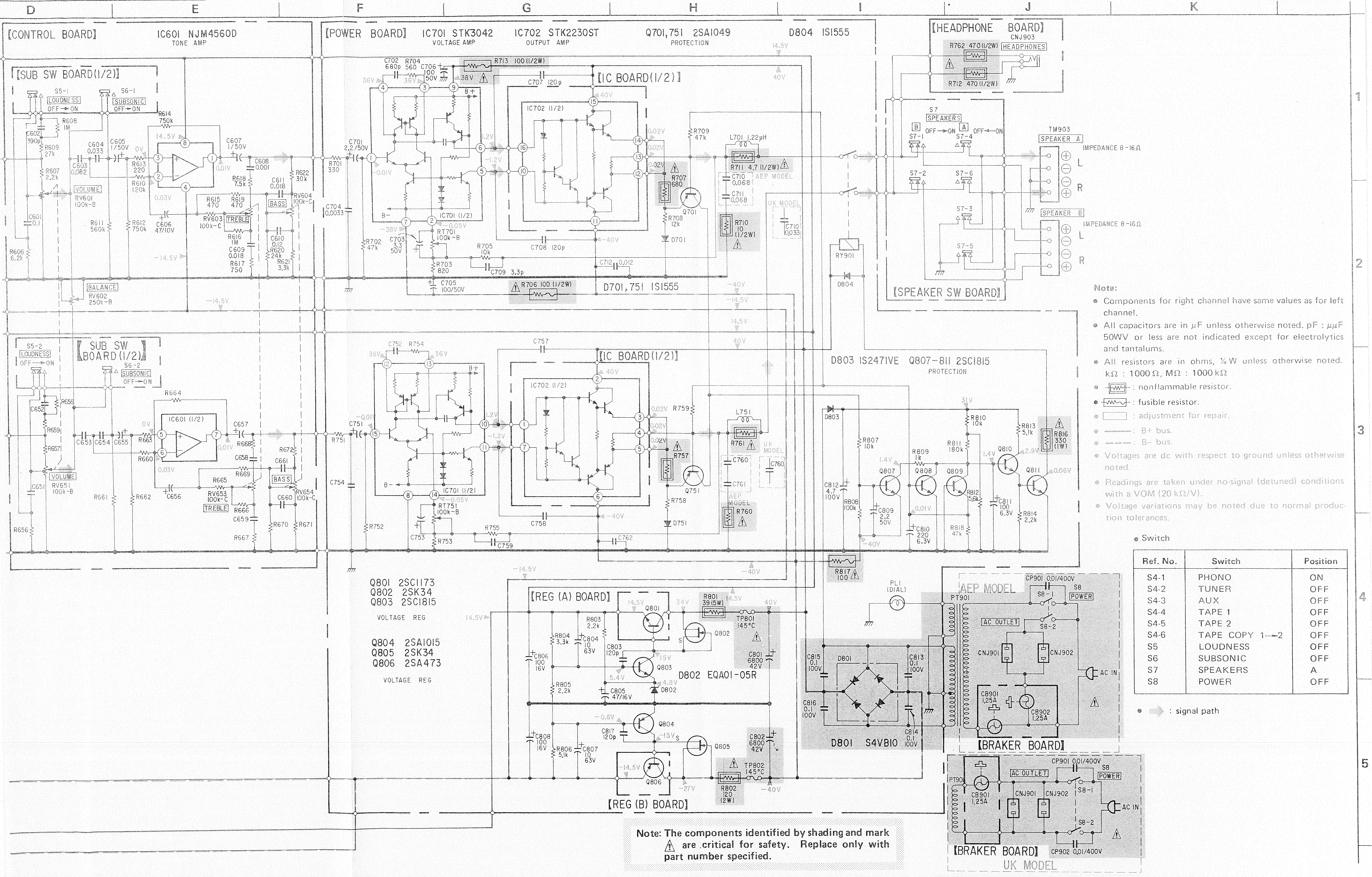
- ░ : B + pattern
- ▒ : B – pattern
- ▬▶▬ : signal path
- ━▶ : L-CH signal path
- ━ ━▶ : R-CH signal path


E
F
G
H
I
J
K
1
2
3
4
5
Q801
Q806
IC701
Q804 Q805
Q803
Q802
Q751 IC702
Q808 Q809
Q807 Q810 Q811
Q701
D602
D601
D802
D751 D701
D804 D803
D801
IC501,601 UPC4557C
IC702 STK2230
【REG(A) BOARD】
【REG(B) BOARD】
【IC BOARD】
【POWER BOARD】
【FUNCTION LED(C) BOARD】
(TUNER)
(PHONO)
CTION SW BOARD】
【SPEAKER SW BOARD】
【HEADPHONE BOARD】
【BREAKER BOARD】
L-CH PHONO OUTPUT
R-CH PHONO OUTPUT
TM903
SPEAKER A IMPEDANCE 8-16Ω
SPEAKER B IMPEDANCE 8-16Ω
AC IN
CB901 1.25A
CB902 1.25A
CNJ901
CNJ902
AC OUTLET
CP901 0.01 400V
CP902 0.01 400V
S8 POWER
AEP MODEL
UK MODEL
TO PT901 (PRIMARY SIDE)
PT901
(PRIMARY SIDE)
(AEP MODEL)
(UK MODEL)
PL1 (DIAL)
(CHASSIS)
C801 6800/42V
C802 6800/42V
R801 39(5W)
RY901
TUNER
PHONO
TREBLE
BASS
SONY

4-4. SCHEMATIC DIAGRAM – AMP SECTION –


A
B
C
D
E
F
G
H
1
2
3
4
5
[EQUALIZER BOARD]
Q501,502,551,552 2SC2240
EQ AMP
IC501 UPC4557C
EQ AMP
[FUNCTION SW BOARD]
[CONTROL BOARD]
IC601 NJM4560D
TONE AMP
[POWER BOARD]
IC701 STK3042
VOLTAGE AMP
IC702 STK2230ST
OUTPUT AMP
Q701,751 2SA1049
PROTECTION
[SUB SW BOARD(1/2)]
[IC BOARD(1/2)]
L-CH
R-CH
TM902
J501 PHONO
J502 AUX
J503 TAPE 1
J504 REC OUT1
J505 TAPE 2
J506 REC OUT2
J551 PHONO
J552 AUX
J553 TAPE 1
J554 REC OUT1
J555 TAPE 2
J556 REC OUT 2
S4-1-1 PHONO
S4-2-1 TUNER
S4-3-1 AUX
S4-4-1 TAPE 1
S4-5-1 TAPE 2
S4-6-1 TAPE COPY 1→2
ON
OFF
S5-1 LOUDNESS OFF→ON
S6-1 SUBSONIC OFF→ON
S5-2 LOUDNESS OFF→ON
S6-2 SUBSONIC OFF→ON
VOLUME RV601 100k-B
BALANCE RV602 250k-B
TREBLE RV603 100k-C
BASS RV604 100k-C
VOLUME RV651 100k-B
TREBLE RV653 100k-C
BASS RV654 100k-C
IC601 (1/2)
IC701 (1/2)
IC702 (1/2)
R713 100 (1/2W)
R706 100 (1/2W)
D701,751 1S1555
TUNER SECTION
(L-CH)
(R-CH)
(GND)
E
F
G
[FUNCTION LED (C) BOARD]
[FUNCTION LED (B) BOARD]
[FUNCTION LED (A) BOARD]
[POINTER BOARD]
D601-605 GL3NG95
D606 GL3PR5
D901 GL9HY22
(PHONO)
(TUNER)
(AUX)
(TAPE 1)
(TAPE 2)
(TAPE COPY 1→2)
(DIAL POINTER)
D
C
A
B
14.5V
14.5V (TUNER : OFF)
-14.5V
Q801 2SC1173
Q802 2SK34
Q803 2SC1815
VOLTAGE REG
Q804 2SA1015
Q805 2SK34
Q806 2SA473
VOLTAGE REG
[REG (A) BOARD]
[REG (B) BOARD]
D802 EQA01-

Note: The components
⚠ are critical
part number sp


D
E
F
G
H
I
J
K
1
2
3
4
5
[CONTROL BOARD]
IC601 NJM4560D
TONE AMP
[SUB SW BOARD(1/2)]
S5-1 LOUDNESS OFF→ON
S6-1 SUBSONIC OFF→ON
VOLUME RV601 100k-B
BALANCE RV602 250k-B
TREBLE RV603 100k-C
BASS RV604 100k-C
[POWER BOARD]
IC701 STK3042
VOLTAGE AMP
IC702 STK2230ST
OUTPUT AMP
Q701,751 2SA1049
PROTECTION
D804 1S1555
[IC BOARD(1/2)]
IC702 (1/2)
IC701 (1/2)
R713 100 (1/2W)
R706 100 (1/2W)
L701 1.22μH
R711 4.7 (1/2W)
AEP MODEL
UK MODEL
D701,751 1S1555
[HEADPHONE BOARD]
CNJ903 HEADPHONES
R762 470 (1/2W)
R712 470 (1/2W)
S7 SPEAKERS
TM903 SPEAKER A
SPEAKER B
IMPEDANCE 8-16Ω
RY901
[SPEAKER SW BOARD]
S5-2 LOUDNESS OFF→ON
[SUB SW BOARD(1/2)]
S6-2 SUBSONIC OFF→ON
IC601 (1/2)
VOLUME RV651 100k-B
TREBLE RV653 100k-C
BASS RV654 100k-C
D803 1S2471VE Q807-811 2SC1815
PROTECTION
Q801 2SC1173
Q802 2SK34
Q803 2SC1815
VOLTAGE REG
Q804 2SA1015
Q805 2SK34
Q806 2SA473
VOLTAGE REG
[REG (A) BOARD]
R801 39 (5W)
TP801 145°C
C801 6800 42V
D802 EQA01-05R
[REG (B) BOARD]
R802 120 (2W)
TP802 145°C
C802 6800 42V
PL1 (DIAL)
PT901
D801 S4VB10
AEP MODEL
AC OUTLET
CNJ901
CNJ902
S8 POWER
CP901 0.01/400V
CB901 1.25A
CB902 1.25A
AC IN
[BRAKER BOARD]
CP902 0.01/400V
UK MODEL

Note:

- Components for right channel have same values as for left channel.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼ W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- : nonflammable resistor.
- : fusible resistor.
- ☐ : adjustment for repair.
- ——— : B+ bus.
- – – – : B– bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (20 kΩ/V).
- Voltage variations may be noted due to normal production tolerances.
- Switch

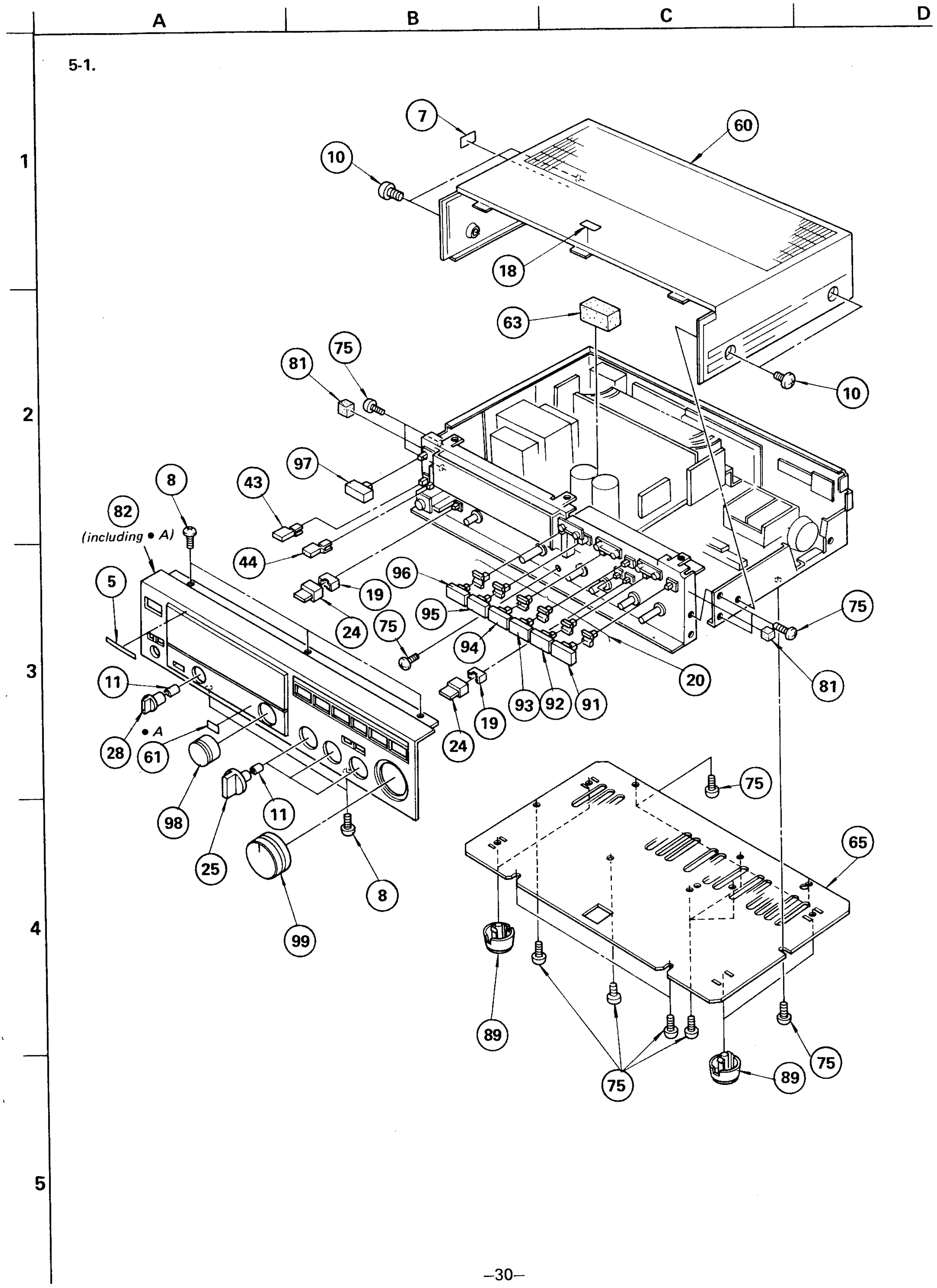
Ref. No.	Switch	Position
S4-1	PHONO	ON
S4-2	TUNER	OFF
S4-3	AUX	OFF
S4-4	TAPE 1	OFF
S4-5	TAPE 2	OFF
S4-6	TAPE COPY 1→2	OFF
S5	LOUDNESS	OFF
S6	SUBSONIC	OFF
S7	SPEAKERS	A
S8	POWER	OFF

- ➡ : signal path

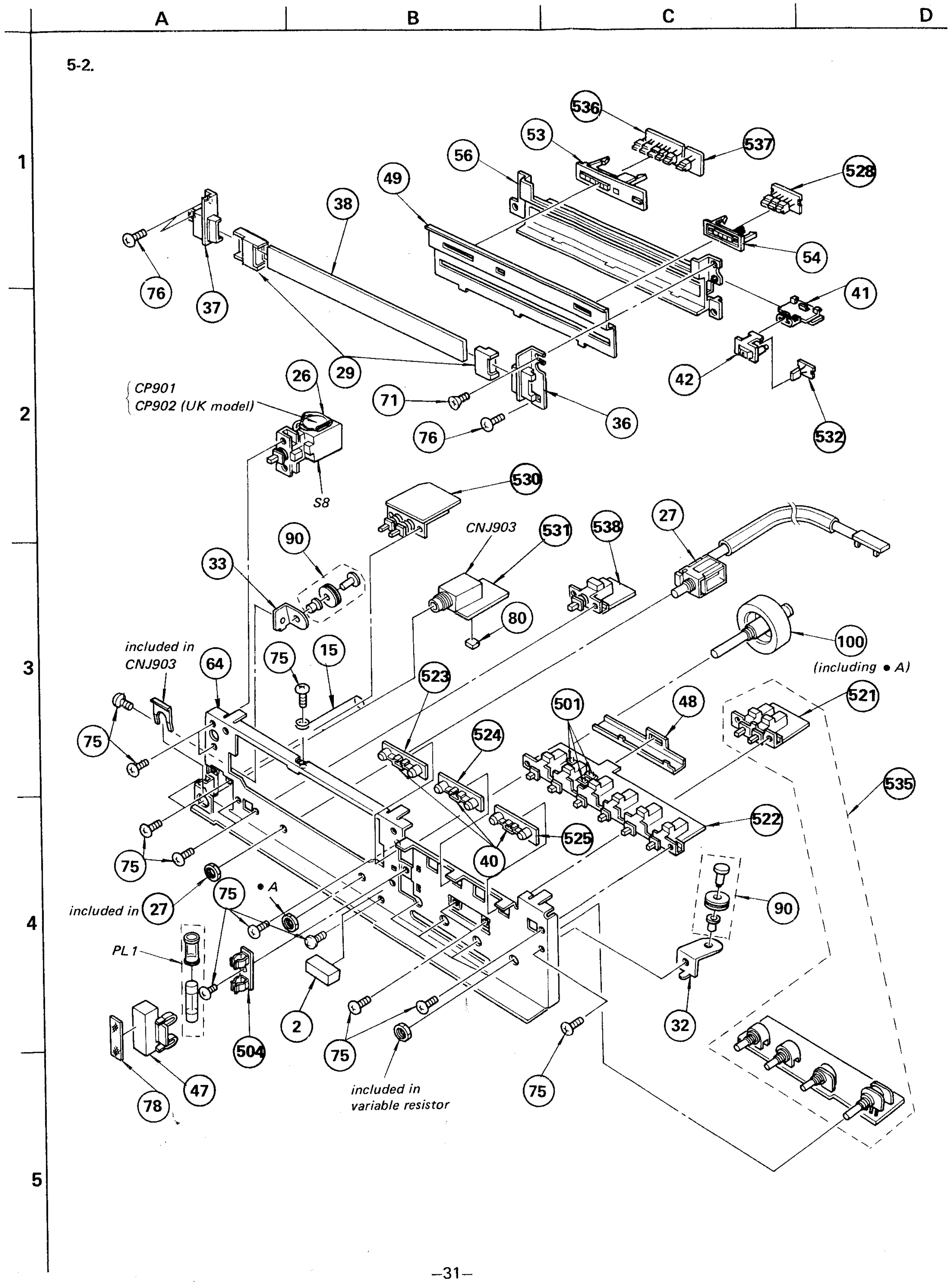
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 5
EXPLODED VIEWS AND PARTS LIST

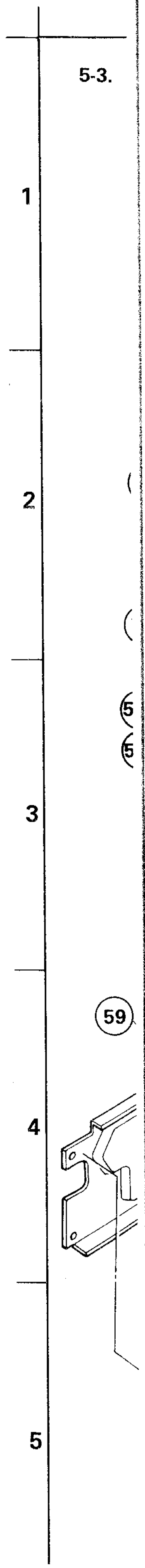
5-1.


A
B
C
D
1
2
3
4
5
7
60
10
18
63
81
75
10
97
8
43
82
(including ● A)
44
96
19
5
75
95
24
94
20
75
81
11
93
92
91
19
24
28
● A
61
98
11
25
8
99
65
75
89
75
89
75

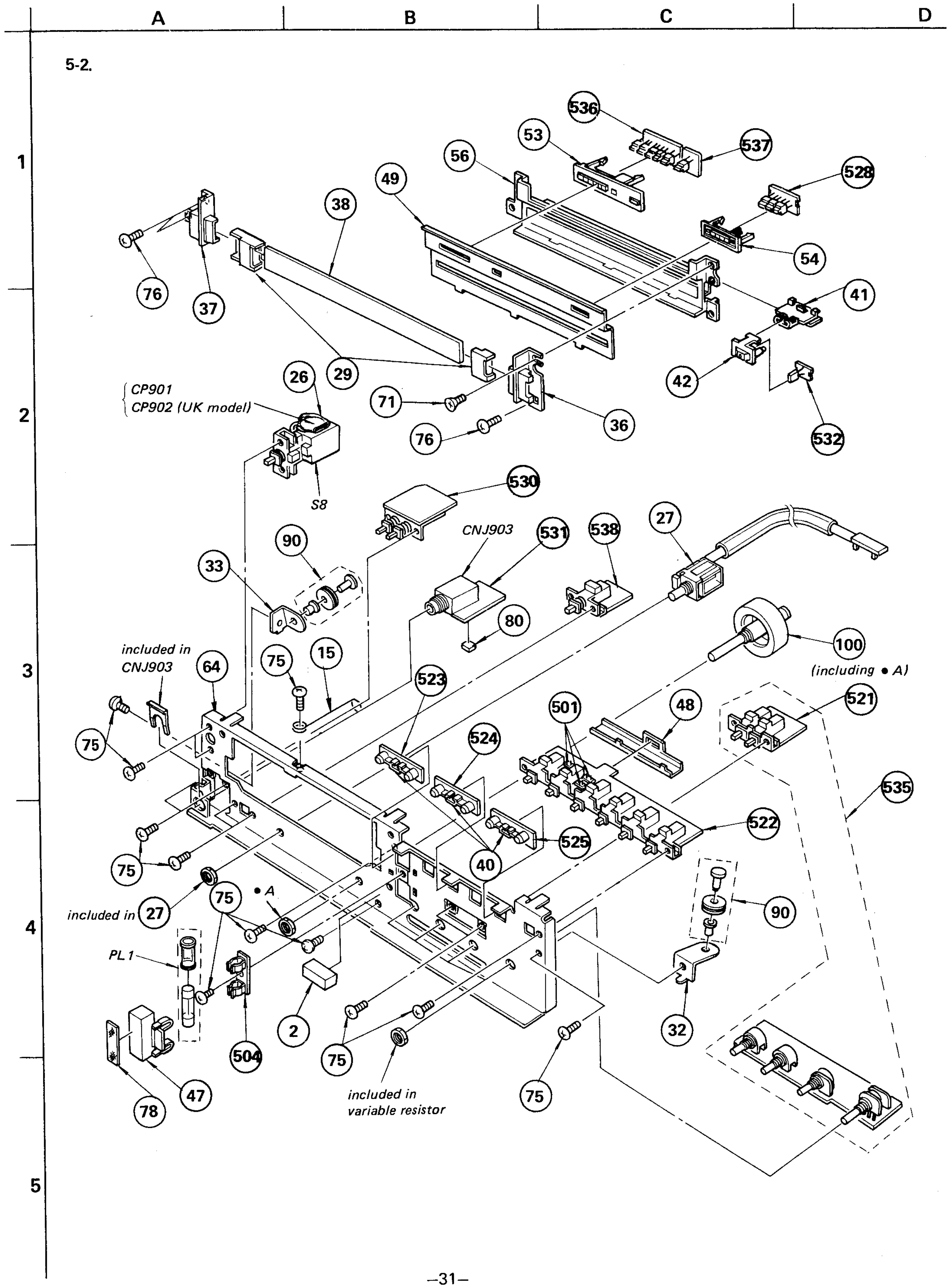
5-2.


A
B
C
D
1
2
3
4
5
536
53
537
56
528
49
38
54
41
76
37
29
26
CP901
CP902 (UK model)
71
36
42
76
532
S8
530
CNJ903
531
538
27
90
33
80
100
(including ● A)
included in CNJ903
64
75
15
523
501
48
521
75
524
535
522
525
40
75
included in
27
75
● A
90
PL1
2
504
32
75
47
78
75
included in variable resistor
75

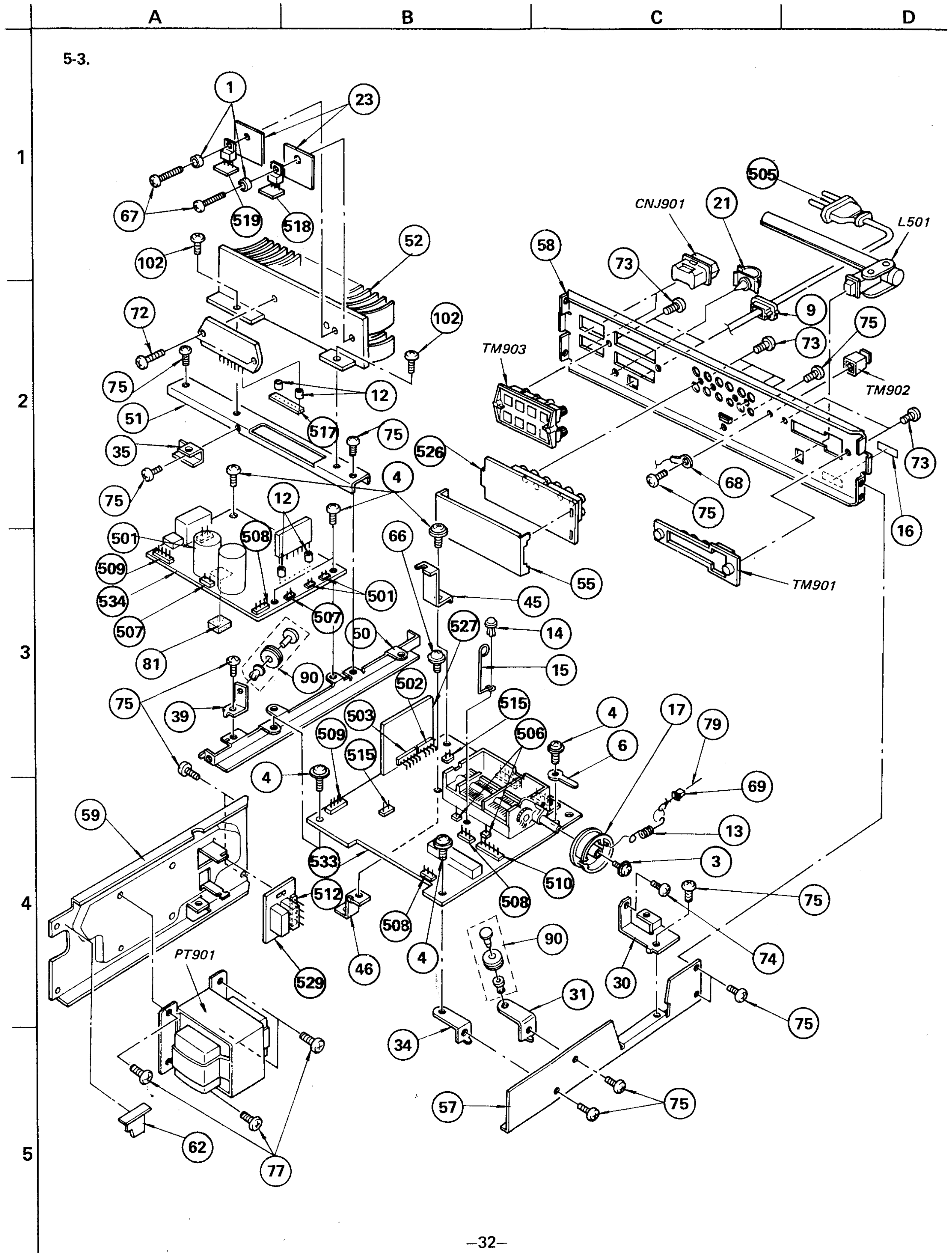
5-3.



5-2.


A
B
C
D
CP901
CP902 (UK model)
S8
CNJ903
(including • A)
included in CNJ903
included in
• A
PL1
included in variable resistor

5-3.


A
B
C
D
CNJ901
L501
TM903
TM902
TM901
PT901

GENERAL SECTION

No.	Part No.	Description
1	2-832-007-00	BUSHING (K), INSULATING
2	3-480-149-00	CUSHION
3	3-701-462-00	SCREW, LOCK
4	3-701-589-00	SCREW, SELF-TAPPING
5	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)
6	3-701-822-00	HOLDER, WIRE
7	3-703-079-21	(UK)...LABEL, CAUTION (BACK)
8	3-703-108-01	SCREW +BV 3X6, S TIGHT
9	3-703-244-00	BUSHING, CORD
10	3-703-354-11	SCREW (OS), TOP COVER, CLAW
11	3-703-466-00	SPRING (6600)
12	3-886-569-00	TUBE, RUBBER
13	4-809-050-00	SPRING, TENSION
14	4-812-134-00	RIVET, NYLON, 3.5
15	♠;4-838-818-00	LEAD, CLAMP INDICATOR
16	♠;4-844-449-00	LABEL
17	4-859-586-01	DRUM (165), DIAL
18	4-861-045-00	LABEL, CAUTION
19	4-864-307-00	RING
20	4-866-342-00	JOINT (B), KNOB
21	4-869-217-00	CLIP, CORD
22	....	
23	4-874-042-00	SHEET (A), INSULATING
24	4-874-058-41	KNOB, SQUARE (3X14)
25	4-875-152-00	KNOB, CONTROL
26	4-875-455-21	COVER (DIA. 20), CAPACITOR
27	4-875-818-00	SWITCH, BAND SELECTION
28	4-875-827-01	KNOB, BAND SELECTOR
29	♠;4-876-706-00	RETAINER, DIAL SCALE
30	♠;4-876-707-00	BRACKET, F.E
31	♠;4-876-708-00	BRACKET (A), PULLEY
32	♠;4-876-709-00	BRACKET (B), PULLEY
33	♠;4-876-710-00	BRACKET (C), PULLEY
34	♠;4-876-711-00	BRACKET (C), PC BOARD
35	♠;4-876-712-00	BRACKET (B), PC BOARD
36	4-876-713-00	HOLDER (R), DIAL SCALE
37	4-876-714-00	HOLDER (L), DIAL SCALE
38	4-876-715-11	SCALE, DIAL
39	♠;4-876-716-00	BRACKET (D), PULLEY
40	4-876-717-00	HOLDER (F), LED
41	4-876-718-00	HOLDER, POINTER
42	4-876-719-00	POINTER
43	4-876-722-01	KNOB (4X10), SQUARE
44	4-876-722-11	KNOB (4X10), SQUARE
45	♠;4-876-723-00	RETAINER, PC BOARD

GENERAL SECTION

No.	Part No.	Description
46	♠;4-876-724-00	BRACKET (D), PC BOARD
47	♠;4-876-725-00	HOUSE, LAMP
48	♠;4-876-726-00	PLATE (A), SHIELD
49	4-876-733-11	PLATE, ORNAMENTAL
50	♠;4-876-735-00	BRACKET (A), PC BOARD
51	♠;4-876-736-00	BRACKET, HEAT SINK
52	♠;4-876-737-01	HEAT SINK (LARGE)
53	4-876-741-00	HOLDER (S), LED
54	4-876-743-00	HOLDER (A), LED
55	♠;4-876-744-00	PLATE (B), SHIELD
56	4-876-745-00	TABLE, POINTER
57	♠;4-876-746-00	PLATE (R), SIDE
58	♠;4-876-747-21	(AEP)....PLATE, JACK
58	♠;4-876-747-31	(UK).....PLATE, JACK
59	♠;4-876-749-00	PLATE (L), SIDE
60	4-876-750-01	COVER, TOP
61	♠;4-876-751-00	MARK, A.S.L
62	♠;4-876-752-00	PLATE, INSULATING
63	♠;4-876-753-00	CUSHION
64	♠;4-876-754-11	PANEL, SUB
65	♠;4-876-755-01	PLATE, BOTTOM
66	4-893-523-11	SCREW 3X8
67	7-621-259-55	SCREW +P 2.6X8
68	7-623-508-01	LUG, 3
69	7-623-616-01	EYELET, 2X3
70	....	
71	7-685-246-24	SCREW +KTP 3X8 TYPE2 SLIT
72	7-685-550-24	SCREW +BVTP 3X16 TYPE2 SLIT
73	7-685-646-11	SCREW +BVTP 3X8 TYPE2 N-S
74	7-685-870-01	SCREW +BVTT 3X5 (S)
75	7-685-871-01	SCREW +BVTT 3X6 (S)
76	7-685-872-01	SCREW +BVTT 3X8 (S)
77	7-685-880-01	SCREW +BVTT 4X6 (S)
78	9-911-815-01	CUSHION (H)
79	9-911-825-42	STRING, 0.5MM WHITE
80	9-911-841-XX	STOPPER
81	9-911-843-XX	CUSHION
82	A-4322-354-A	PANEL ASSY
83	....	
84	....	
85	....	
86	....	
87	....	
88	....	
89	X-4864-303-0	FOOT ASSY
90	X-4864-705-0	PULLEY ASSY

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

COILS
- MMH : mH, UH : μH

GENERAL SECTION

No.	Part No.	Description
91	X-4875-101-0	KNOB ASSY, PHONO
92	X-4875-102-0	KNOB ASSY, TUNER
93	X-4875-103-0	KNOB ASSY, AUX
94	X-4875-104-0	KNOB ASSY, TAPE (1)
95	X-4875-105-0	KNOB ASSY, TAPE (2)
96	X-4875-106-0	KNOB ASSY, TAPE COPY
97	X-4875-108-0	KNOB ASSY, POWER
98	X-4875-113-2	KNOB (DIA.24) (A) ASSY, R
99	X-4876-702-0	KNOB (DIA.40) ASSY, R
100	♠;X-4876-703-0	WHEEL ASSY, TUNING
101	....	
102	7-685-873-01	SCREW +BVTT 3X10 (S)

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
121	1-501-184-00	ANTENNA, FEEDER
122	3-701-630-00	BAG, POLYETHYLENE
123	3-783-627-11	MANUAL, INSTRUCTION
124	4-864-354-00	SHEET, POLYETHYLENE
125	4-876-763-00	INDIVIDUAL CARTON
126	4-876-765-00	CUSHION (LEFT), LOWER
127	4-876-766-00	CUSHION (RIGHT), LOWER
128	4-876-767-00	CUSHION (UPPER)

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
501	♠;1-508-809-00	BASE POST (14MM) 2P			
502	♠;1-508-831-12	H TYPE BASE POST			
503	♠;1-508-832-12	H TYPE BASE POST			
504	1-533-051-XX	HOLDER,CYLINDRICAL LAMP			
505	⚠.1-534-817-XX	(AEP)...CORD, POWER, EULO PLUG			
505	⚠.1-551-884-00	(UK)....CORD, POWER			
506	♠;1-535-114-00	TERMINAL			
507	♠;1-535-115-00	TERMINAL			
508	♠;1-535-116-00	TERMINAL			
509	♠;1-535-117-00	TERMINAL			
510	♠;1-535-118-00	TERMINAL			
511	....				
512	♠;1-535-141-00	BASE POST 19MM (10MM PITCH) 4P			
513	♠;1-535-149-11	WIRE (30.0MM)			
514	....				
515	♠;1-560-060-00	PIN, CONNECTOR 2P			
516	....				
517	♠;1-605-322-00	PC BOARD, IC			
518	♠;1-605-323-00	PC BOARD, REG (A)			
519	♠;1-605-324-00	PC BOARD, REG (B)			
520	....				
521	♠;1-605-326-00	PC BOARD, SUB SW			
522	♠;1-605-327-00	PC BOARD, FUNCTION SW			
523	♠;1-605-328-00	PC BOARD, FUNCTION LED (A)			
524	♠;1-605-329-00	PC BOARD, FUNCTION LED (B)			
525	♠;1-605-330-00	PC BOARD, FUNCTION LED (C)			
526	♠;1-605-331-00	PC BOARD, EQUALIZER			
527	♠;1-605-332-00	PC BOARD, ASL			
528	♠;1-605-333-00	ASL LED			
529	♠;1-605-334-00	BREAKER			
530	♠;1-605-335-00	SPEAKER			
531	♠;1-605-336-00	PC BOARD, HEADPHONE			
532	♠;1-605-337-00	PC BOARD, POINTER			
533	♠;A-4351-257-A	MOUNTED PCB, TUNER			
534	♠;A-4409-478-A	(AEP)...MOUNTED PCB, POWER			
534	♠;A-4409-479-A	(UK)....MOUNTED PCB, POWER			
535	♠;A-4409-482-A	MOUNTED PCB, SWITCH, CONTROL			
536	♠;1-605-177-00	PC BOARD, SIGNAL (A)			
537	♠;1-605-179-00	PC BOARD, SIGNAL (C)			
538	♠;1-605-450-00	PC BOARD, FUNCTION (A)			
C321	1-102-880-00	CERAMIC	15PF	5%	50V
C324	1-102-731-00	CERAMIC	62PF	5%	50V
C505	1-130-302-00	FILM	0.016MF	5%	100V
C506	1-130-315-00	FILM	0.056MF	5%	100V
C555	1-130-302-00	FILM	0.016MF	5%	100V
C556	1-130-315-00	FILM	0.056MF	5%	100V
C801	⚠.1-125-157-00	ELECT(BLOCK)	6800MF	20%	42V
C802	⚠.1-125-157-00	ELECT(BLOCK)	6800MF	20%	42V
C813	⚠.1-108-389-00	MYLAR	0.1	10%	100V
C814	⚠.1-108-389-00	MYLAR	0.1	10%	100V

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- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

COILS
- MMH : mH, UH : μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C815	⚠.1-108-389-00	MYLAR 0.1 10% 100V
C816	⚠.1-108-389-00	MYLAR 0.1 10% 100V
CB901	⚠.1-532-541-00	CIRCUIT BREAKER
CB902	⚠.1-532-541-00	(AEP)....CIRKIT BREAKER
CF101	1-527-278-XX	FILTER, SOLID STATE
CF301	1-527-599-00	FILTER, MECHANICAL
CNJ901	⚠1-526-694-00	(AEP)...OUTLET, AC
CNJ901	⚠1-526-636-00	(UK)....OUTLET, AC
CNJ902	⚠1-526-694-00	(AEP)...OUTLET, AC
CNJ902	⚠1-526-636-00	(UK)....OUTLET, AC
CNJ903	1-507-669-00	JACK
CP901	⚠.1-161-744-00	CERAMIC 10000PF 400V
CP902	⚠.1-161-744-00	(UK)....CERAMIC 10000PF 400V
CT301	1-141-179-12	CAP, TRIMMER
CT302	1-141-179-12	CAP, TRIMMER
CT303	1-141-171-00	CAP, TRIMMER
CT304	1-141-171-00	CAP, TRIMMER
D001	8-719-912-00	DIODE MV-12N
D002	8-719-815-55	DIODE 1S1555
D003	8-719-815-55	DIODE 1S1555
D004	8-719-901-52	DIODE SLP151B
D005	8-719-901-52	DIODE SLP151B
D006	8-719-902-51	DIODE SLP251B
D101	8-719-925-26	DIODE (LED BLOCK) SLP-252B
D102	8-719-422-21	DIODE 1T22AM
D104	8-719-815-55	DIODE 1S1555
D201	8-719-901-52	DIODE SLP151B
D202	8-719-815-55	DIODE 1S1555
D203	8-719-815-55	DIODE 1S1555
D204	8-719-815-55	DIODE 1S1555
D205	8-719-815-55	DIODE 1S1555
D206	8-719-815-55	DIODE 1S1555
D301	8-719-815-55	DIODE 1S1555
D302	8-719-815-55	DIODE 1S1555
D303	8-719-815-55	DIODE 1S1555
D601	8-719-930-95	DIODE GL-3NG95
D602	8-719-930-95	DIODE GL-3NG95
D603	8-719-930-95	DIODE GL-3NG95
D604	8-719-930-95	DIODE GL-3NG95
D605	8-719-930-95	DIODE GL-3NG95
D606	8-719-903-05	DIODE GL-3PR5
D701	8-719-815-55	DIODE 1S1555
D751	8-719-815-55	DIODE 1S1555
D801	⚠.8-719-504-10	DIODE S4VB10
D802	8-719-936-05	DIODE EQA01-05R
D803	8-719-947-10	DIODE 1S2471VE
D804	8-719-815-55	DIODE 1S1555
D901	8-719-919-24	DIODE GL-9HY22
FE101	1-463-368-00	FRONT END
IC001	8-759-145-58	IC UPC4558C
IC101	8-759-812-35	IC LA1235
IC102	8-759-904-89	IC TL489CP
IC201	8-759-833-90	IC LA3390
IC301	8-759-812-45	IC LA1245
IC501	8-759-145-57	IC UPC4557C
IC601	8-759-745-60	IC NJM4560D
IC701	8-759-830-42	IC STK-3042
IC702	8-759-822-30	IC STK-2230ST
J501	1-507-747-00	JACK, PIN 6P
J502	1-507-747-00	JACK, PIN 6P
J503	1-507-747-00	JACK, PIN 6P
J504	1-507-637-21	JACK, PIN 6P
J505	1-507-637-21	JACK, PIN 6P
J506	1-507-637-21	JACK, PIN 6P
J551	1-507-747-00	JACK, PIN 6P
J552	1-507-747-00	JACK, PIN 6P
J553	1-507-747-00	JACK, PIN 6P
J554	1-507-637-21	JACK, PIN 6P
J555	1-507-637-21	JACK, PIN 6P
J556	1-507-637-21	JACK, PIN 6P
L301	1-407-173-XX	MICRO INDUCTOR 220UH
L302	1-405-953-00	COIL (OSC)
L303	1-405-954-00	COIL (OSC)
L701	●;1-420-872-00	COIL, AIRE CORE
L751	●;1-420-872-00	COIL, AIRE CORE
L901	1-401-913-00	ANTENNA, FERRITE-ROD (LW/MW)
PL1	1-518-070-41	LAMP
PT901	⚠.1-447-031-00	(AEP)...TRANSFORMER, POWER
PT901	⚠.1-447-032-00	(UK)....TRANSFORMER, POWER
Q001	8-729-663-47	TRANSISTOR 2SC1364
Q002	8-729-663-47	TRANSISTOR 2SC1364
Q003	8-729-663-47	TRANSISTOR 2SC1364
Q004	8-729-663-47	TRANSISTOR 2SC1364
Q005	8-729-663-47	TRANSISTOR 2SC1364
Q006	8-729-663-47	TRANSISTOR 2SC1364
Q007	8-729-201-52	TRANSISTOR 2SA1015
Q008	8-729-201-52	TRANSISTOR 2SA1015
Q009	8-729-201-52	TRANSISTOR 2SA1015
Q101	8-729-883-92	TRANSISTOR 2SC2839
Q201	8-729-663-47	TRANSISTOR 2SC1364
Q202	8-729-663-47	TRANSISTOR 2SC1364
Q203	8-729-663-47	TRANSISTOR 2SC1364
Q501	8-729-140-02	TRANSISTOR 2SC1400
Q502	8-729-140-02	TRANSISTOR 2SC1400

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CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

COILS
- MMH : mH, UH : μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q551	8-729-140-02	TRANSISTOR 2SC1400
Q552	8-729-140-02	TRANSISTOR 2SC1400
Q701	8-729-204-91	TRANSISTOR 2SA1049
Q751	8-729-204-91	TRANSISTOR 2SA1049
Q801	8-729-217-33	TRANSISTOR 2SC1173
Q802	8-729-634-04	TRANSISTOR 2SK34-D
Q803	8-729-663-47	TRANSISTOR 2SC1364
Q804	8-729-201-52	TRANSISTOR 2SA1015
Q805	8-729-634-04	TRANSISTOR 2SK34-D
Q806	8-729-247-33	TRANSISTOR 2SA473
Q807	8-729-663-47	TRANSISTOR 2SC1364
Q808	8-729-663-47	TRANSISTOR 2SC1364
Q809	8-729-663-47	TRANSISTOR 2SC1364
Q810	8-729-663-47	TRANSISTOR 2SC1364
Q811	8-729-663-47	TRANSISTOR 2SC1364
R105	⚠.1-247-109-00	CARBON 120 5% 1/4W F
R114	⚠.1-247-109-00	CARBON 120 5% 1/4W F
R126	⚠.1-247-083-00	CARBON 10 5% 1/4W F
R201	⚠.1-247-109-00	CARBON 120 5% 1/4W F
R302	⚠.1-247-115-00	CARBON 220 5% 1/4W F
R308	⚠.1-247-109-00	CARBON 120 5% 1/4W F
R706	⚠.1-212-982-00	FUSIBLE 100 5% 1/2W F
R707	⚠.1-247-127-00	CARBON 680 5% 1/4W F
R710	⚠.1-247-192-00	CARBON 10 5% 1/2W F
R711	⚠.1-247-188-00	CARBON 4.7 5% 1/2W F
R712	⚠.1-247-232-00	CARBON 470 5% 1/2W F
R713	⚠.1-212-982-00	FUSIBLE 100 5% 1/2W F
R757	⚠.1-247-127-00	CARBON 680 5% 1/4W F
R760	⚠.1-247-192-00	CARBON 10 5% 1/2W F
R761	⚠.1-247-188-00	CARBON 4.7 5% 1/2W F
R762	⚠.1-247-232-00	CARBON 470 5% 1/2W F
R801	⚠.1-217-305-00	WIREWOUND 39 10% 5W F
R802	⚠.1-207-913-00	WIREWOUND 120 10% 2W F
R816	⚠.1-213-137-00	METAL 330 5% 1W F
R817	⚠.1-217-399-00	FUSIBLE 100 5% 1/4W F
RT101	1-226-237-00	RES, ADJ, CARBON 20K
RT201	1-226-237-00	RES, ADJ, CARBON 20K
RT202	1-226-236-00	RES, ADJ, CARBON 10K
RT701	1-226-239-00	RES, ADJ, CARBON 100K
RT751	1-226-239-00	RES, ADJ, CARBON 100K
RV601	1-228-319-00	RES, VAR, CARBON 100K/100K
RV602	1-228-273-00	RES, VAR, CARBON 250K/250K
RV603	1-228-321-00	RES, VAR, CARBON 100K/100K
RV604	1-228-320-00	RES, VAR, CARBON 100K/100K
RV651	1-228-319-00	RES, VAR, CARBON 100K/100K
RV653	1-228-321-00	RES, VAR, CARBON 100K/100K
RV654	1-228-320-00	RES, VAR, CARBON 100K/100K
RY901	1-515-405-00	RELAY
S1	1-553-764-00	SWITCH, SLIDE (1 KEY)
S2	1-553-763-00	SWITCH, SLIDE (REMOTE TYPE)
S4	1-553-777-00	SWITCH, PUSH (6 KEY)
S5	1-553-775-00	SWITCH, PUSH (2 KEY)
S6	1-553-775-00	SWITCH, PUSH (2 KEY)
S7	1-553-761-00	SWITCH, PUSH (2 KEY)
S8	⚠.1-553-447-00	SWITCH, PUSH (AC POWER)
T101	1-404-170-00	TRANSFORMER, IF
T301	1-409-348-00	COIL, MECHANICAL FILTER
TM901	1-536-663-00	TERMINAL, BOARD (ANTENNA)
TM902	1-535-132-00	TERMINAL
TM903	1-536-662-00	TERMINAL BOARD (SPEAKER)
TP801	⚠.1-532-556-00	FUSE, TEMPERATURE
TP802	⚠.1-532-556-00	FUSE, TEMPERATURE

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COILS
- MMH : mH, UH : μH

ELECTROLYTIC CAPACITORS

RATING → : Use the high voltage rated one.

CAP. (µF)	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47					→	1-121-726-00
1.0					→	1-121-391-00
2.2					→	1-121-450-00
3.3	→	→	→	1-121-392-00	→	1-121-393-00
4.7	→	→	→	1-121-395-00	→	1-121-396-00
10	→	→	1-121-651-00	1-121-398-00	→	1-121-738-00
22	→	→	1-121-479-00	1-121-480-00	1-121-662-00	1-121-152-00
33	→	→	1-121-403-00	1-121-404-00	1-121-652-00	1-121-405-00
47	→	1-121-352-00	1-121-409-00	1-121-410-00	1-121-653-00	1-121-411-00
100	→	1-121-414-00	1-121-415-00	1-121-416-00	1-121-357-00	1-121-417-00
220	1-121-412-00	1-121-420-00	1-121-421-00	1-121-422-00	1-121-261-00	1-121-423-00
330	1-121-751-00	1-121-805-00	1-121-521-00	1-121-654-00	1-121-655-00	1-121-656-00
470	1-121-424-00	1-121-425-00	1-121-426-00	1-121-733-00	1-121-361-00	1-121-810-00
1000	–	1-121-736-00	1-121-245-00	1-121-657-00	1-121-388-00	1-123-061-00
2200	1-121-658-00	1-121-659-00	1-121-660-00	1-123-067-00	1-121-984-00	–
3300	1-121-661-00	1-123-075-00	1-123-071-00	–	–	–

CAP. (µF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	–	–	–	–
1.0	1-123-249-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-250-00	1-123-026-00	–	1-123-028-00
3.3	1-121-995-00	–	1-123-004-00	1-123-006-00
4.7	1-123-255-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-121-126-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-121-996-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-121-997-00	1-121-757-00	–	–
47	1-123-251-00	1-121-919-00	–	–
100	1-123-084-00	–	–	–

CERAMIC CAPACITORS

RATING

CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (µF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001µF = 1,000pF

CERAMIC (SEMICONDUCTOR) CAPACITORS

RATING → : Use the high voltage rated one.

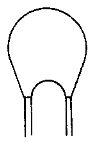
CAP. (µF)	25 VOLT.	50 VOLT.	CAP. (µF)	25 VOLT.	50 VOLT.
	PART No.	PART No.		PART No.	PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

MYLAR CAPACITORS

RATING

CAP. (µF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (µF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (µF)	50 VOLT.	100 VOLT.	200 VOLT.
	PART No.	PART No.	PART No.		PART No.	PART No.	PART No.		PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	–	–
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	–	–
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	–	–
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	–	–
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				

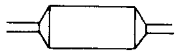
TANTALUM CAPACITORS



RATING → : Use the high voltage rated one.

CAP. (µF)	3.15 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	25 VOLT.	35 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.01					→	→	1-131-396-00
0.015						→	1-131-397-00
0.022						→	1-131-398-00
0.033						→	1-131-399-00
0.047						→	1-131-400-00
0.068					→	→	1-131-401-00
0.1					→	→	1-131-402-00
0.15					→	→	1-131-403-00
0.22					→	→	1-131-404-00
0.33					→	1-131-409-00	1-131-405-00
0.47	–	–	–	–	1-131-412-00	→	1-131-406-00
0.68	–	–	–	1-131-415-00	→	1-131-410-00	1-131-407-00
1.0	–	–	1-131-418-00	–	1-131-413-00	→	1-131-408-00
1.5	–	1-131-421-00	–	1-131-416-00	→	1-131-411-00	1-131-348-00
2.2	1-131-424-00	–	1-131-419-00	–	1-131-414-00	1-131-355-00	1-131-349-00
3.3	–	1-131-422-00	–	1-131-417-00	1-131-362-00	1-131-356-00	1-131-350-00
4.7	1-131-425-00	–	1-131-420-00	1-131-369-00	1-131-363-00	1-131-357-00	1-131-351-00
6.8	–	1-131-423-00	1-131-376-00	1-131-370-00	1-131-364-00	1-131-358-00	1-131-352-00
10	1-131-426-00	1-131-383-00	1-131-377-00	1-131-371-00	1-131-365-00	1-131-359-00	1-131-353-00
15	1-131-390-00	1-131-384-00	1-131-378-00	1-131-372-00	1-131-366-00	1-131-360-00	–
22	1-131-391-00	1-131-385-00	1-131-379-00	1-131-373-00	1-131-367-00		
33	1-131-392-00	1-131-386-00	1-131-380-00	1-131-374-00			
47	1-131-393-00	1-131-387-00	1-131-381-00	–			
68	1-131-394-00	1-131-388-00	–	–			
100	1-131-395-00	–	–	–			

TANTALUM CAPACITORS



RATING

CAP. (µF)	3 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	35 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.033						1-131-273-00
0.047						1-131-274-00
0.068						1-131-275-00
0.1						1-131-276-00
0.15						1-131-277-00
0.22			–	–	1-131-262-00	1-131-278-00
0.33			–	–	1-131-263-00	1-131-279-00
0.47			1-131-169-00	–	1-131-264-00	1-131-280-00
0.68			–	1-131-258-00	1-131-265-00	1-131-281-00
1.0			1-131-254-00	–	1-131-266-00	1-131-282-00
1.5		1-131-250-00	–	–	1-131-267-00	1-131-283-00
2.2		–	–	1-131-259-00	1-131-268-00	1-131-284-00
3.3		–	1-131-255-00	–	1-131-269-00	–
4.7		1-131-251-00	1-131-171-00	–	1-131-270-00	–
6.8		–	–	1-131-260-00	1-131-271-00	–
10	–	–	1-131-256-00	–	1-131-272-00	–
15	–	1-131-252-00	–	1-131-261-00		
22	–	–	1-131-257-00	–		
33	1-131-176-00	1-131-253-00	1-131-173-00	–		
47	1-131-288-00	1-131-174-00	–	–		
100	1-131-177-00					

1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1 246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:

– P 3 x 10

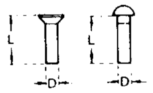
L: *Length in mm*

D: *Diameter in mm*

Type of head

Indicated slotted-head only.

Unless otherwise indicated, it means
cross-recessed head (Phillips type).



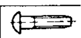
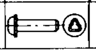
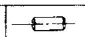
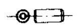
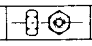
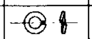
Reference Designation	Shape	Description	Remarks
		SCREWS	
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Nut, Washer, Retaining ring:

N 3

Diameter of usable screw or shaft

Reference designation

Reference Designation	Shape	Description	Remarks
		SELF-TAPPING SCREWS	
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
		SET SCREWS	
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
		NUT	
N		nut	
		WASHERS	
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
		RETAINING RINGS	
E		retaining ring	
G		grip-type retaining ring	

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